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2615

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2 870

MAP VTOC-1

PART NO.

8488565

4008774

8488567

Volume:

09

Title:

MI MAPs F76A-F7B5

4331-2/4331-11

Machine Type: Power Design Level:

B/M Number 4331-2:

5683207

B/M Number 4331-11: 4687170

PAGE NUMBER	PART NO.
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13SEP82

EC 366582 PEC EC366493

2615

MAP VTOC-1

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PN 4687017

POWER PROBLEM

PAGE 1 OF 6

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER
F7XX	A	1	001
0280	X	3	012

EXIT POINTS

EXIT TH	IS MAP	ТО	
PAGE	STEP	MAP	ENTRY
NUMBER	NUMBER	NUMBER	POINT
5	027	0200	A
5	030	0202	A
<i>l</i> _t	019	0204	A
2	005	0212	A
3	013	0280	A
2	003	0293	A
6	041	0297	Α

100

Symptom:

PS102 +6.8V to PS114 on 01A-C1 out of tolerance, A61.

Suspected errors or FRU's (including intermittent errors)
1 TR102 primary fuse. 2 PS102-CP06 tripped. 3 Relay PCC-K03 failing. 4 PS114 power module 01A-C1F5/G5/H5 5 PS114 control card 01A-C1D4. 6 PC sense card 01A-A2D2. 7 TR102. 8 PS102. 9 A61 sense wiring. 10 +6.8V bulk distribution.
1

(Entry Point A)

Press power-off key.

Is PS102-CP06 tripped?

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REF.CODE F7C21201

2 4331-2

30JUN80 PN 8488542 EC 366407 PEC 366286 2620 MAP F76A-1

Power Problem PAGE 2 OF 6

002 (Entry Point D)

- 1.Switch PCC-CB01 off.
- 2.Check primary fuse TR102-F01.

Is the fuse TR102-F01 ok?

Y N

003

Go To Map 0293, Entry Point A.

DANGER:

| Line voltage present inside of | | the PCC-box.

- 1.Switch PCC-SW01 off (if not already off).
- 2.Open PCC box and connect CE-meter (range 500VAC)

to connector PCC-26-001 and to connector PCC-26-002 (ALD-YA321)

- 3.Switch PCC-CB01 on.
- 4. Observe meter, press power-on switch and wait approximately one minute.

Was line voltage at least momentarily present?

N Y

005

Go To Map 0212, Entry Point A.

Is reference code F7C21201 displayed?

Y N

007

Go to MAP for displayed reference code. If no reference code is displayed, Go to Page 5, Step 027, Entry Point C.

30JUN80

PN 8488542

EC 366407

PEC 366286

2620

MAP F76A-2

C REF.CODE F7C21201 2	D E F 2620 MAP F76A-3
Power Problem	
PAGE 3 OF 6	
FAGE SUF 6	
008	010
1.Press power-off key.	1.Press power-off key.
2.Connect CE-meter (range 15VDC)	2.Switch PCC-CB01 off.
+lead to PS102-TB07	3.Replace transformer
'+6.8V FL PS102 to 01A-C1 PS114'	TR102.
-lead to PS102-TB08	Go to Page 4, Step 019, Entry Point Z.
(ALD-YA433)	014
The leads of your meter must be connected	011
without removing the FDS cable.	1.Press power-off key. 2.Switch PCC-CB01 off.
3. Press power-on switch and wait approximately one minute.	3.Replace power supply PS102.
approximately one minute.	Go to Page 4, Step 019, Entry Point Z.
Was approximately +6.8VDC at least least	Go to rage 4, Step 013, Entry Font 2.
momentarily present?	012
Y N	(Entry Point X)
	(Littly 1 diff 74)
009	Have you already performed the IPS service
1.Check connector PS102-04 for correct	check for PS114?
seating.	Y N
2.Connect CE-meter (range 15VAC) to) .
connector PS102-04-001	013
'7.1VAC CP06'	Perform IPS service check for PS114
and to connector PS102-04-004	according to Map 0280.
'center'	Return to ENTRY POINT X of this Map.
(ALD-YA433)	Go To Map 0280, Entry Point A.
3.Press power-on switch, observe meter	
and wait approximately one minute.	014
4.Press power-off switch.	Any error detected and repaired?
5.Disconnect CE-meter from	YN
connector PS102-04-001.	
6.Connect the lead just disconnected before	015
10	1.Connect CE-meter (range 1.5VDC)
connector PS102-04-012 '7.1VAC CP06'	+lead to 01A-A2D2-D05 '+1.5V sense +6.8VDC 01A-C1 A61'
7.1 VAC CP06 7. Press power-off switch.	(ALD-YB641)
8. Observe meter, press power-on switch	-lead to any D08 pin.
and wait approximately one minute.	2.Press power-on switch and wait
and wait approximately one minute.	approximately one minute.
Was approximately 7.1VAC at least	approximatory one minutes
momentarily present for both	Was approximately +1.5VDC at least least
measurements?	momentarily present?
ΥN	YN
	30JUN80 PN 8488542
	EC 366407 PEC 366286
DEF	5 5 4 G H J 2620 MAP F76A-3



REF.CODE F7C21201 2620 MAP F76A-5 **Power Problem** PAGE 5 OF 6 023 029 There is a short circuit to ground. Check 1.Press power-off switch. and repair wiring of signal 2. Replace sense card which is now '+1.5V sense +6.8V 01A-C1 A61' located in position 01A-A2C2. (ALD-YB241) Go to Page 4, Step 019, or replace board 01A-A2. Entry Point Z. Go to Page 4, Step 019, Entry Point Z. 030 024 Suspect wiring problem. 1.Press power-off key. Perform *Wiring Check Procedure* 2.Repair sense wiring from 01A-A2D2-D05 shown in book Maintenance '+1.5V sense +6.8V 01A-C1 A61' Information (MI) POWER. (ALD-YB641) If no error detected. to 01A-A2A2-B11 Go To Map 0202, Entry Point A. '+1.5V sense +6.8V 01A-C1 A61' (ALD-YB241) 031 or replace board 01A-A2. 1.Press power-off key. 2. Replace PC sense card which is now in Go to Page 4, Step 019, Entry Point Z. position 01A-A2C2. 025 3. Press power-on switch and wait 1. Press power-off switch. approximately one minute. 2.Exchange both PC sense cards in positions 01A-A2D2 and 01A-A2C2. Is the "power complete" indicator on? 3. Press power-on switch and wait approximately one minute. 032 Is the "power complete" indicator on Go to Step 026, Entry Point H. Y N 033 026 Go to Page 4, Step 019, Entry Point Z. (Entry Point H) Is any reference code displayed? Go to Page 4, Step 019, Entry Point Z. Y N 035 027 1.Switch PS102-CP06 on. (Entry Point C) 2. Press power-on switch and wait approximately one minute. Go To Map 0200, Entry Point A. Is reference code F7C21201 displayed? Y N Is the reference code F7C21201 displayed? Is any other reference code displayed? **30JUN80** PN 8488542 EC 366407 PEC 366286 PQR 2620 MAP F76A-5

Go To Map 0297, Entry Point A.

041

2620 MAP F76A-6

30JUN80 PN 8488542 EC 366407 PEC 366286 2620 MAP F76A-6

REF.CODE F7C21401 FIX 0001 POWER PROBLEM

PAGE 1 OF 10

ENTRY POINTS

EXIT POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	А	1	001

EXIT TH	IS MAP	ТО .	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
. 6	033	F76F	Н
10	061	02A0	Α
5	026	0200	Α
9	054	0202	Α
6	032	0204	Α
3 6	006	0212	Α
6	035	0292	Α
2	004	0293	Α

001

Symptom:

P\$102 +10.1V on 01A-B2 out of tolerance, A39.

Suspected errors or FRU's (including intermittent errors)
1
10 TRIOZ. 11 AC-distribution from PCC to TR102

(Entry Point A)

Press power-off key.

Is PS102-CP03 tripped?

Y N

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REF.CODE F7C21401

A B AEA2630

13SEP82 PN 8488543 EC 366582 PEC 366286 2630 MAP F76B-1

REF.CODE F7C21401 2630 MAP F76B-2 **POWER PROBLEM** PAGE 2 OF 10 002 (Entry Point B) 1.Switch to CE-mode at CE panel. 2. Press power-on switch and wait approximately one minute. Is the *power complete* indicator on? Y N 003 1.Press power-off key. 2.Switch PCC-CB01 off. 3. Check primary fuse TR102-F01. (ALD-YA433). Is fuse TR102-F01 ok? ΝY 004 Go To Map 0293, Entry Point A. 005 (Entry Point M) DANGER | Line Voltage present| | during following measurements 1.Switch PCC-SW01 off (if not already off). 2.Connect CE-meter (range 500VAC) to connector PCC-26-001 and to connector PCC-26-002. (ALD-YA321) 3.Switch PCC-CB01 on. 4. Observe meter press power-on switch and wait approximately one minute. Was Line voltage at least momentarily present? 13SEP82 PN 8488543 EC 366582 PEC 366286 2630 MAP F76B-2 D E 2

REF.CODE F7C21401

POWER PROBLEM

PAGE 3 OF 10

006

Go To Map 0212, Entry Point A.

007

Is reference code F7C21401 displayed?

Y N

008

Go to MAP for displayed reference code. If no reference code is displayed, Go to Page 5, Step 026, Entry Point Y.

009

- 1.Press POWER-OFF key.
- 2.Disconnect FDS cables from PS102-TB01 and PS102-TB05.
- Connect CE-meter (range 15VDC) according to following table and measure the output voltages of PS102.
- 4.Press POWER-ON switch and wait approximately one minute.

Normal Voltage	+ Lead 	- Lead 	Lower Limit
+ 5.10	PS102-TB01-001	PS102-TB02-001	+4.6V
+10.1V	PS102-TB05-001	PS102-TB06-001	+8.2V

Are both voltages below its lower limit?

13SEP82 PN 8488543 EC 366582 PEC 366286 2630 MAP F76B-3

REF.CODE F7C21401 Н 2630 MAP F76B-4 POWER PROBLEM PAGE 4 OF 10 010 014 1.Press POWER-OFF key. 1.Press power-off key. 2.Reconnect FDS cables to PS102-TB01 and 2.Connect CE-meter (range 1.5VDC) PS102-TB05. +lead to 01A-A2D2-B06 3.Connect CE-meter (range 15VDC) '+1.5V sense +10.1V 01A-B2 A39' +lead to 01A-B2B2-E14 (ALD-YB641) '+10.1V sense PS102 01A-B2 A39' -lead to any D08 pin. (ALD-YC851) 3. Carefully watch your meter. -lead to any D08 pin. 4. Press power-on switch and wait The +lead of your meter must be connected approximately one minute. without removing the connectors. 4. Press power-on switch and wait Was approximately +1.5VDC at least approximately one minute. momentarily present? N Was approximatley +10.1VDC at least momentarily present? 015 NY Is the voltage measured in previous step higher than 2.0VDC? Y N 1. Press power-off key. 2.Ensure that connectors on 01A-B2B2-E14 016 and 01A-B2W3-E14 and 01A-B2B3-E14 1. Press power-off key. are seated correctly. 2.Connect CE-meter (range 1.5VDC) 3.Connect CE-meter (range 15VDC) +lead to paddle card connector exit +lead to 01A-B2B3-E14 or 01A-A2A2-D12 '+1.5V sense +10.1V 01A-B2 A39' 01A-B2W3-E14 '+10.1V PS102 to 01A-B2 IC adapt' (ALD-YB241) (ALD-YC851) -lead to any D08 pin. -lead to any D08 pin. 3. Press power-on switch and wait The +lead of your meter must be connected approximately one minute. without removing the connectors. 4. Press power-on switch and wait Was approximately +1.5VDC at least approximately one minute. momentarily present? Y N Was approximately +10.1VDC at least momentarily present? NY 012 Go to Page 6, Step 038, Entry Point G. 013 Board wiring of +10.1V net is defective. 1. Press power-off key. 2. Replace board 01A-B2. Go to Page 6, Step 032, Entry Point Z. 13SEP82 PN 8488543 EC 366582 PEC 366286

2630

MAP F76B-4

M REF.CODE F7C21401	J K L 2630 MAP F76B-5
POWER PROBLEM	4 4 4 R I D
PAGE 5 OF 10	
017	022
1.Press power-off key.	1.Press power-off key.
2.Connect CE-meter (range ohm x1) to any D08 pin and to 01A-A2A2-D12	2.Repair sense wiring from 01A-A2D2-B06
'+1.5V sense +10.1V 01A-B2 A39'	'+1.5V sense +10.1V 01A-B2 A39'
(ALD-YB241).	(ALD-YB641)
3.Remove PC sense card from position	to 01A-A2A2-D12
01A-A2D2.	'+1.5V sense +10.1V 01A-B2 A39' (ALD-YB241)
Is the resistance below 200 ohm?	or replace board 01A-A2.
Y N	Go to Page 6, Step 032, Entry Point Z.
018	023
(Entry Point L)	1.Press power-off key.
	2. Replace paddle card with cable in position
1. Press power-off key.	01A-A2A2.
2.Repair or replace cable with paddle card from board 01A-B2 to 01A-A2A2.	Go to Page 6, Step 032, Entry Point Z.
Go to Page 6, Step 032, Entry Point Z.	024
019	1.Press power-off key. 2.Exchange both PC sense cards in positions
Do not disconnect the CE-meter.	01A-A2D2 and 01A-A2C2.
1.Remove paddle card from position	3. Press power-on switch and wait
01A-A2A2.	approximately one minute.
Is the resistance below 200 ohm?	Is the *power complete* indicator on?
Y N	YN
020	025
Go to Step 018, Entry Point L.	(Entry Point H)
021 There is a short circuit between the signal	Is any reference code displayed? Y N
'+1.5V sense +10.1V 01A-B2 A39'	
(ALD-YB641)	026
(ALD-YB241) and DC-GND.	(Entry Point Y)
Check and repair board wiring or replace board	Go To Map 0200, Entry Point A.
01A-A2.	
Go to Page 6, Step 032, Entry Point Z.	027 Is reference code F7C21401 displayed?
	Y N
	···
	1225222
	13SEP82 PN 8488543
	EC 366582 PEC 366286 6 6 6 N P Q 2630 MAP F76B-5
	N P Q 2630 MAP F76B-5

C F N P 2 3 5 5 REF.CODE F7C21401 R 2630 MAP F76B-6 **POWER PROBLEM** PAGE 6 OF 10 028 036 1.Press power-off key. 1.Connect CE-meter (range 15VDC) 2. Replace PC sense card in position +lead to 01A-B2B2-E14 01A-A2C2. '+10.1V sense PS102 01A-B2 A39' Go to Step 032, (ALD-YC851) Entry Point Z. -Lead to any D08 pin 'DC-GND' Suspect power program error. Retry Is +10.1VDC +/-1.0V present? power-on with the diagnostic diskette. Y N If the problem still exists, Go to Page 9, Step 054, Entry Point X. 037 1.Connect CE-meter (range 15VDC) 030 +lead to 01A-B2B3-E14 1. Press power-off key. or 01A-B2W3-E14 2. Replace PC sense card which is now in '+10.1V PS102 to 01A-B2 IC Adapt' position 01A-A2C2. -lead to any D08 pin 3. Press power-on switch and wait 'DC-GND' approximately one minute. (ALD-YC851) Is the *power complete* indicator on? Is +10.1VDC +/-1.0V present? N Y YN 031 Go to Page 5, Step 025, Entry Point H. (Entry Point G) 032 1.Connect CE-meter (range 15VDC) (Entry Point Z) +lead to PS102-TB05-001 or to PS102-TB05-002 Go To Map 0204, Entry Point A. '+10.1V PS102 to 01A-C1 PS111' -lead to PS102-TB06-001 or to PS102-TB06-002 Go To Map F76F, Entry Point H. 'DC-GND' (ALD-YA433). 034 2. Press power-on switch and wait (Entry Point K) approximately one minute. Run voltage measurement program. Is only Was approximately +10.0VDC at least +10.1V PS102 on 01A-B2 out of tolerance momentarily present? (Address 85, bit 6)? Y N Y N 035 Go To Map 0292, Entry Point A. 13SEP82 PN 8488543 EC 366582 PEC 366286 R 2630 MAP F76B-6

REF.CODE F7C21401 **POWER PROBLEM** PAGE 7 OF 10 039 1.Press power-off key. 2.Check connector PS102-03 for correct seating.

3.Connect CE-meter (range 15VAC) to connector PS102-03-001 or to connector PS102-03-004 '10.7VAC CP03' and to connector PS102-03-002 or PS102-03-003. 'center' (ALD-YA433).

4. Press power-on switch and wait approximately one minute.

Was approximatley 10.7VAC at least momentarily present?

NY 040

Go to Step 042, Entry Point J.

041

W X

1. Press power off switch.

2.Connect CE-meter (range15VAC) to connector PS102-03-005 or connector PS102-03-006 '10.7VAC CP03' and to connector PS102-03-002 or connector PS102-03-003 'center' (ALD-YA433)

3. Press power on switch and wait approximately one minute.

Was approximately 10.7VAC at least momentarily present?

ΥN

WX 2630 MAP F76B-7 042 (Entry Point J)

1.Press power off switch. 2.Switch PCC-CB01 off. 3. Replace transformer TR102. Go to Page 6, Step 034, Entry Point K.

043

1.Press power-off key.

2.Switch PCC-CB01 off.

3. Replace power supply PS102.

Go to Page 6, Step 032, Entry Point Z.

PN 8488543 EC 366582 PEC 366286

MAP F76B-7

13SEP82

2630

REF.CODE F7C21401

Ų 6

Go to Page 6, Step 032, Entry Point Z.

T 2630 MAP F76B-8

045

- 1.Press power-off key.
- 2. Remove all cards from board 01A-B2.
- 3.Connect CE-meter (range 15VDC)
- +lead to 01A-B2B2-E14
- '+10.1V sense PS102 01A-B2 A39' (ALD-YC851)
- -lead to any D08 pin.
- 4. Press power-on switch and wait approximately one minute.

Was +10.1VDC +/- 1.0V present?

ΥN

046

01A-B2.

- 1.Press power-off key.
- 2.Suspect sense wiring error on board 01A-B2.Repair board wiring or replace board
- 3. Press power-on switch and wait approximately one minute.
- Go to Page 6, Step 034, Entry Point K.

047

Suspect overload condition caused by a faulty card.

- 1.Press power-off key.
- 2.Replug cards step by step. After each step press power on switch wait approximately one minute and observe your meter reading. Replace the defective card which caused an incorrect meter reading at the sense point.
- 3. Press power-on switch and wait approximately one minute.

Go to Page 6, Step 034, Entry Point K.

13SEP82 PN 8488543 EC 366582 PEC 366286 2630 MAP F76B-8

REF.CODE F7C21401 2630 MAP F76B-9 **POWER PROBLEM** PAGE 9 OF 10 048 052 (Entry Point F) 1. Press power-off key. 2. Exchange both PC sense cards in positions 1.Press power-off key. 01A-A2D2 and 01A-A2C2. 2. Check the accuracy of your CE-meter 3. Press power-on switch and wait according to "Hints For Power MAP Usage" in approximately one minute. book MI POWER, Vol.16. 4. Run voltage measurement program. 3.Check +1.5V voltage at PC sense card 1 Is address 85 bit 6 out of tolerance? Connect CE-meter (range 5VDC) YN +lead to 01A-A2D2-B06 '+1.5V sense +10.1V 01A-B2 A39' 053 -lead to any D08 pin. 1. Press power-off key. 'DC-GND' 2. Replace PC sense card which is now in (ALD-YB641). position 01A-A2C2. Go to Page 6, Step 032, Entry Point Z. Is +1.5VDC +/-10% present? 054 ΥN (Entry Point X) Go To Map 0202, Entry Point A. Check +1.5 voltage at connector exit: 1.Connect CE-meter (range 1.5V DC) +lead to 01A-A2A2-D12. 055 '+1.5V sense +10.1V 01A-B2 A39' 1.Switch PS102-CP03 on. -lead to any D08 pin 2. Press power-on switch and wait 'DC-GND' approximately one minute. (ALD-YB241). Is reference code F7C21401 displayed? 2. Press power-on switch and wait YN approximately one minute. Is +1.5VDC +/-10% present? Is any other reference code displayed? Y N Y N 050 1. Press power-off key. 2. Repair or replace cable with paddle card Go to Page 6, Step 032, Entry Point Z. from board 01A-B2 to 01A-A2A2. Go to Page 6, Step 032, Entry Point Z. 058 Go to corresponding MAP 051 059 1. Press power-off key. Is PS102-CP03 tripped? 2. Repair wiring or replace board 01A-A2. Go to Page 6, Step 032, Entry Point Z. Y N 060 Go to Page 2, Step 002, Entry Point B. 13SEP82 PN 8488543 EC 366582 PEC 366286 2630 MAP F76B-9

A Y

REF.CODE F7C21401 POWER PROBLEM

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061

Go To Map 02A0, Entry Point A.

2630

MAP F76B-10

13SEP82

PN 8488543

EC 366582

PEC 366286

2630

MAP F76B-10

REF.CODE F7C21601 FIX 0000

POWER PROBLEM

PAGE 1 OF 6

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER
F7XX	A	1	001
0280	X	3	012

2640

MAP F76C-1

EXIT POINTS

EXIT TH	IS MAP	ТО		
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT	
5	027	0200	Α	
5	030	0202 0204	A A	
3	011			
2	005	0212	A A	
3 2	013	0280		
2	003	0293	Α	
6	041	0295	Α	

001

Symptom:

PS102 +7.1V to PS112 on 01A-C1 out of tolerance, A57.

tolerance, A57.				
Suspected errors or FRU's (including intermittent errors)				
1 Primary fuse TR102-F01. 2 PS102-CP05 tripped. 3 Relay PCC-K03 failing. 4 PS112 power module 01A-C1H4. 5 PS113 power module 01A-C1/F3/G3/H3 and 01A-C1E3				
if present. 6 PS112 control card 01A-C1C4. 7 PS113 control card 01A-C1D2. 8 PC sense card 01A-A2D2. 9 TR102. 10 PS102. 11 A57 sense wiring. 12 7.1V bulk distribution.				

(Entry Point A)

Press power-off key.

(Step 001 continues)

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22MAY80

PN 8488544

EC 366286

PEC 366269

2640

MAP F76C-1

Power Problem

PAGE 2 OF 6

(Step 001 continued) Is PS102-CP05 tripped? N Y 002 (Entry Point B) 1.Switch PCC-CB01 off. 2. Check primary fuse TR102-F01. Is the primary fuse TR102-F01 ok? Y N 003 Go To Map 0293, Entry Point A. 004 DANGER | Line voltage present inside of | | the PCC-box. 1.Switch PCC-SW01 off (if not already off). 2. Open PCC-box and connect CE-meter (range 500VAC) to connector PCC-26-001 and to connector PCC-26-002 (ALD-YA321) 3.Switch PCC-CB01 on. 4. Observe meter, press power-on switch and wait approximately one minute. Was line voltage at least momentarily present? Y N 005 Ge To Map 0212, Entry Point A. 006 Is reference code F7C21601 displayed?

22MAY80

PN 8488544

EC 366286

PEC 366269

2640

MAP F76C-2

2640 MAP F76C-3

(Step 009 continued)
Was approximately 7.5VAC at least momentarily present for both measurements?

Y N

D

010

1.Press power-off key.

2.Switch PCC-CB01 off.

3.Replace transformer

TR102.

Go to Step 011, Entry Point Z.

011

1.Press power-off key.

2.Switch PCC-CB01 off.

3. Replace power supply PS102.

(Entry Point Z)

Go To Map 0204, Entry Point A.

012

(Entry Point X)

Have you already performed the the IPS service check for PS112 and PS113?

Y N

013

Perform IPS service check for PS112 and for PS113 according to MAP 0280. Return to ENTRY POINT X of this MAP if no error detected.

Go To Map 0280, Entry Point A.

014

Any error detected and repaired?

22MAY80

PN 8488544

EC 366286

PEC 366269

5 4

2640

MAP F76C-3

)

REF.CODE F7C21601 H J K 2640 MAP F76C-4 **Power Problem** PAGE 4 OF 6 015 018 1.Connect CE-meter (range 1.5VDC) 1. Press power-off switch. +lead to 01A-A2D2-B11 2. Repair or replace cabling from '+1.5V sense +7.1V 01A-C1 A57' connector PS102-09 (ALD-YB641) (ALD-YA433) -lead to any D08 pin. to 01A-C1E7 and 01A-C1F6. 2. Press power-on switch and wait (ALD-YA523). approximately one minute. Go to Page 3, Step 011, Entry Point Z. Was approximately +1.5VDC at least 019 momentarily present? 1.Press power-off switch. Y N 2.Repair wire from 01A-C1E7-00B (ALD-YA523) to 01A-C1B4-B13 (ALD-YA529) 1.Press power-off switch. '+7.1V FL sense PS102 01A-C1 A57' 2.Connect CE-meter (range 15VDC) Go to Page 3, Step 011, Entry Point Z. +lead to 01A-C1B4-B13. '+7.1V FL sense PS102 01A-C1 A57' 020 (ALD-YA529) 1.Connect CE-meter (range 1.5VDC) -lead to 01A-C1J4-B +lead to paddle card connector exit 'DC GND' 01A-A2A2-D07 (ALD-YA535) '+1.5V sense +7.1V 01A-C1 A57' 2. Press power-on switch and wait (ALD-YB241) approximately one minute. -lead to any D08 pin. 2.Press power-on switch and wait Was approximately +7.1VDC at least approximately one minute. momentarily present? A M Was approximately +1.5VDC at least momentarily present? 017 Y N 1.Connect CE-meter (range 1.5VDC) +lead to 01A-C1E7-00A 021 -lead to 01A-C1F6-00A 1.Press power-off switch. (ALD-YA523) 2.Connect CE-meter (range ohm X1) 2. Press power-on switch and wait to 01A-A2D2-B11 approximately one minute. '+1.5V sense +7.1V 01A-C1 A57' (ALD-YB641) Was approximately +7.1VDC at least and to any D08 pin. momentarily present? 3.Remove PC sense card 1 from 01A-A2D2 and paddle card from 01A-A2A2. Is the resistance below 100 chm? 22MAY80 PN 8488544 EC 366286 PEC 366269 2640 MAP F76C-4

G L M N **Power Problem** PAGE 5 OF 6 022 027 1.Press power-off key. (Entry Point C) 2. Repair or replace cable with paddle card from board 01A-C1B4 to 01A-A2A2. 028 Go to Page 3, Step 011, Entry Point Z. 023 There is a short circuit to ground. Check and repair wiring of signal Y N '+1.5V sense +7.1V 01A-C1 A57' 029 (ALD-YB641) or replace board 01A-A2. Go to Page 3, Step 011, Entry Point Z. 024 1.Press power-off key. 2.Repair sense wiring from 01A-A1D2-B11 030 '+1.5V sense +7.1V 01A-C1 A57' 1.Press power-off switch. (ALD-YB641) to 01A-A2A2-D07 '+1.5V sense +7.1V 01A-C1 A57' (ALD-YB241) or replace board 01A-A2. Go to Page 3, Step 011, Entry Point Z. 031 025 1.Press power-off key. 1.Press power-off switch. 2. Exchange both PC sense cards in position position 01A-A2C2. 01A-A2D2 and 01A-A2C2. 3. Press power-on switch and wait approximately one minute. approximately one minute. Is the "power complete" indicator on? NY 032 Go to Step 026, Entry Point H. (Entry Point H) 033 Is any reference code displayed? Go to Page 3, Step 011, Entry Point Z. 22MAY80 EC 366286 PQR 2640

REF.CODE F7C21601

PQR 2640 MAP F76C-5 Go To Map 0200, Entry Point A. Is reference code F7C21601 displayed? 1. Press power-off switch. 2. Replace sense card which is now located in position 01A-A2C2. Go to Step 027, Entry Point C. 2. Suspect wiring problem. Check wiring

according to "Wiring Check Procedure" shown in book Maintenance Information (MI) POWER. If no error detected, Go To Map 0202, Entry Point A.

- 2. Replace PC sense card which is now in
- 3. Press power-on switch and wait

Is the "power complete" indicator on?

Go to Page 3, Step 011, Entry Point Z.

PN 8488544 PEC 366269 MAP F76C-5

```
REF.CODE F7C21601
                                                              2640
                                                                           MAP F76C-6
A
2
               Power Problem
               PAGE 6 OF 6
035
1.Switch PS102-CP05 on.
2.Press power-on switch and wait
approximately one minute.
Is reference code F7C21601 displayed?
YN
  036
  Is any other reference code displayed?
     037
     Go to Page 3, Step 011, Entry Point Z.
  038
  Go to corresponding MAP
039
Press power-off switch.
Is PS102-CP05 tripped?
YN
  040
  Go to Page 2, Step 002, Entry Point B.
041
```

Go To Map 0295, Entry Point A.

22MAY80 PN 8488544 EC 366286 PEC 366269 2640 MAP F76C-6

REF.CODE F7F21801 FIX 0000 POWER PROBLEM

PAGE 1 OF 11

ENTRY POINTS

EXIT POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	Α	1	001

EXIT TK	IS MAP	то		
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT	
5 6 6 9 11 2	030 035 038 047 064 004	0200 0202 0204 0212 0292 0293 0299	A A A A A	

001

Symptom:

PS102 +5.1V on 01A-B1 out of tolerance, A54.

Suspected errors or FRU's (including intermittent errors)
1 PS102-CP02 tripped. 2 PC sense card O1A-A2D2. 3 +5.1VDC distribution (via O1A-B2) 4 A54 sense wiring. 5 Primary fuse TR102-F01. 6 PS102. 7 TR102. 8 AC distribution from PCC-box to TR102.

(Entry Point A)

Is PS102-CP02 tripped?

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REF.CODE F7F21801

2
4331-2

18JUL80 PN 5683433 EC 366387 PEC 366356 2650 MAP F76D-1



REF.CODE F7F21801 2650 MAP F76D-2 **Power Problem** PAGE 2 OF 11 002 007 1. Press power-off key. 1.Press power-off key. 2.Switch to CE-mode at CE panel. 2.Connect CE-meter (range 15VDC) 3. Press power-on switch and wait +lead to 01A-A2A2-D06 '+5.1V sense PS102 01A-B1 A54' approximately one minute. (ALD-YB241). Is the "power complete" indicator on? -lead to any D08 pin. 3. Press power-on switch and wait approximately one minute. 003 1. Press power-off key. Was approximately +5.1VDC at least 2.Switch PCC-CB01 off. momentarily present? 3.Check primary fuse TR102-F01. (ALD-YA431). 008 Is fuse TR102-F01 ok? 1.Press power-off key. Y N 2.Ensure that connectors on 01A-B1A1 and on 01A-B1B4 are seated correctly. 004 3.Connect CE-meter (range 15VDC) +lead to 01A-B1C4-D01 Go To Map 0293, Entry Point A. '(TP +5.1V PS102 on 01A-B1 BSM)' 005 (ALD-YC843) Connect CE-meter (range 15VDC) to -lead to any D08 pin. PS102-TB01-001 (+) and to 4.Press power-on switch and wait PS102-TB02-001 (-) approximately one minute. '+5.1V PS102 to 01A-B2 IC adapt' (ALD-YA431) Was approximately +5.1VDC at least Press power-on switch and wait momentarily present? Y N approximately one minute. Was approximately 5.1VDC at least 009 momentarily present? 1.Press power-off switch. 2.Connect CE-meter (range 15VDC) to Y N 01A-B1A1-A01 (+) '+5.1V P\$102 to 01A-B1 BSM' (ALD-YC843) Go to Page 8, Step 045, Entry Point C. and to any D08 pin (-). The FDS cable 01A-B1A1 must not be disconnected during measurements. (See *Board 01A-B1 of 4331-2* in book MI POWER. Vol.16). 3. Press power on switch and wait approximately one minute. (Step 009 continues) PN 5683433 18JUL80 PEC 366356 EC 366387

2650



```
REF.CODE F7F21801
                                                               2650
                                                                           MAP F76D-3
               Power Problem
               PAGE 3 OF 11
   (Step 009 continued)
  Was approximately +5.1VDC at least
  momentarily present?
   Y N
     010
     Go to Page 10, Step 052, Entry Point D.
  011
  1. Press power-off switch.
  2.Replace board 01A-B1.
  Go to Page 6, Step 038, Entry Point Z.
012
1. Press power-off key.
2.Disconnect FDS connector 01A-B1A1.
3. Ensure that connector O1A-B1B4 is seated
correctly.
4.Use CE-meter (range ohm x1)
and check for electrical connection between
01A-B1A1-A01 and 01A-A2A2-D06
'+5.1V sense PS102 01A-B1 A54'
(ALD-YC843).
Does electrical connection exists between
the listed pins?
Y N
  013
  1. Disconnect cable from Q1A-A2ZC.
  2. Disconnect cable connector 01A-B1B4.
  3. Use your CE-meter (range ohm X1) and
  check continuity between the following pins
  (use the disconnected cable connector
  01A-B1B4 for the measurements)
             from
  01A-B1B4-A04 (ALD-YC843) | 01A-A2F6-E02 (ALD-YB233)
  01A-B1B4-A06 (ALD-YC843) | 01A-A2G6-A04 (ALD-YB233)
  '+5.1V sense PS102 01A-B1 A54'
  Is continuity present for each connection
  shown in the previous table?
                                                               18JUL80
                                                                           PN 5683433
                                                               EC 366387
                                                                           PEC 366356
                                                               2650
                                                                           MAP F76D-3
```

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H J

REF.CODE F7F21801

Power Problem

PAGE 4 OF 11

014

Replace cable from 01A-B1B4 to 01A-A2ZC.

Go to Page 6, Step 038, Entry Point Z.

Use CE-meter (range ohm X1) and check for electrical connection between the following pins:

01A-A2F6-E02 (ALD-YB233)

01A-A2G6-A04 (ALD-YB233)

01A-A2A2-D06 (ALD-YB241)

'+5.1V sense PS102 01A-B1 A54' (ALD-YB233/YB241)

Does electrical connection exists between all listed pins?

N

016

Suspect defective board wiring of +5.1V sense net. 1.Check and repair board wiring or replace board 01A-A2.

2. Reconnect all disconnected cables.

Go to Page 6, Step 038, Entry Point Z.

017

Suspect connector problem of 01A-B1B4 or 01A-A2ZC or defective board wiring of +5.1V net. If no connector problem found, replace board 01A-B1.

Go to Page 6, Step 038, Entry Point Z.

2650

MAP F76D-4

018

1.Reconnect all previously disconnected connectors to 01A-B1.

(Entry Point B)

2.Connect CE-meter (range 1.5VDC)

+lead to 01A-A2D2-S05

'+1.5V sense +5.1V 01A-B1 A54'

(ALD-YB643)

-lead to any D08 pin.

3. Carefully observe your meter and press power-on switch and wait approximately one minute.

Was approximately +1.5VDC at least momentarily present?

N

019

Was the voltage measured in the previous step higher than 2.0VDC?

Y N

020

1.Press power-off key.

2. Connect CE-meter (range 1.5VDC)

+lead to paddie card connector exit

01A-A2A2-B06

'+1.5V sense +5.1V 01A-B1 A54'

(ALD-YB241)

-lead to any D08 pin.

3. Press power-on switch and wait approximately one minute.

Was approximately +1.5VDC at least momentarily present?

18JUL80

PN 5683433

EC 366387

PEC 366356

5 5 5 5 K L M N

2650

REF.CODE F7F21801 2650 MAP F76D-5 K L M Power Problem PAGE 5 OF 11 026 1. Press Power-off key. 1. Press power-off key. 2.Connect CE-meter (range ohm x1) 2. Repair sense wiring from to any D08 pin and to 01A-A2D2-S05 '+1.5V sense +5.1V 01A-B1 A54' 01A-A2A2-B06 '+1.5V sense +5.1V 01A-B1 A54' (ALD-YB643) to 01A-A2A2-B06 (ALD-YB241). 3.Remove PC-sense card from position '+1.5V sense +5.1V 01A-B1 A54' 01A-A2D2. (ALD-YB241) or replace board 01A-A2. Is the resistance below 200 ohm? Go to Page 6, Step 038, Entry Point Z. 027 1.Press power-off key. (Entry Point L) 2. Replace paddle card with cable in position 01A-A2A2. Replace cable with paddle card in position Go to Page 6, Step 038, Entry Point Z. 01A-A2A2. Go to Page 6, Step 038, Entry Point Z. 028 1. Press power-off key. 2.Exchange both PC sense cards in positions Do not disconnect the CE-meter. 01A-A2D2 and 01A-A2C2. 1. Remove paddle card from position 3. Press power-on switch and wait 01A-A2A2. approximately one minute. Is the resistance below 200 ohm? Is the "power complete" indicator on? Y N 029 Go to Step 022, Entry Point L. (Entry Point H) Is any reference code displayed? There is a short circuit between the signal YN '+1.5V sense +5.1V 01A-B1 A54' (ALD-YB643) 030 (ALD-YB241) (Entry Point Y) and DC-GND. Check and repair board wiring or replace board Go To Map 0200, Entry Point A. Go to Page 6, Step 038, Entry Point Z. 031 Is reference code F7F21801 displayed? 18JUL80 PN 5683433 EC 366387 PEC 366356 2650 MAP F76D-5

021

YN

Y N

024

01A-A2.

022

Power Problem

PAGE 6 OF 11

032

1.Press power-off key.
2.Replace PC sense card in position
01A-A2C2

Go to Step 038, Entry Point Z.

033

Suspect power program error. Retry power on with the diagnostic diskette and wait approximately one minute.

Is reference code F7F21801 displayed?

Y N.

034

- 1.Press_power-off switch.
- 2.Replace the control diskette.

Go to Step 038, Entry Point Z.

035

Go To Map 0202, Entry Point A.

036

- 1.Press power-off key.
- 2.Replace PC sense card which is now in position 01A-A2C2.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

Y N

037

Go to Page 5, Step 029, Entry Point H.

038

(Entry Point Z)

Go To Map 0204, Entry Point A.

039

Go to Page 4, Step 018, Entry Point B.

18JUL80

PN 5683433

EC 366387

PEC 366356

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REF.CODE F7F21801
Power Problem

PAGE 7 OF 11

040

(Entry Point K)

Run the voltage measurement program.

Is address 97 bit 2 out of tolerance? (+5.1V PS102 on 01A-B1)

Y N

041

Go to Page 6, Step 038, Entry Point Z.

042

Check the following listed voltages:

	Addr	lBit	Volt	age	from board	Isense	No.
	87 87 87 87 87 87 85	3 1 4 6 5 7 6	+12.3V + 7.3V +12.3V + 9.5V +12.3V + 6.8V	PS102 PS102 PS102 PS102 PS102	01A-C1 01A-C1 01A-C1 01A-C1 01A-C1	A56 A57 A58 A60 A61	7 3)
١							

Is any of the previous listed voltages out of tolerance?

Y N

043

1.Connect CE-meter (range 15VDC)

+lead to 01A-A2A2-D06

'+5.1V sense PS102 01A-B1 A54'

(ALD-YB241)

-lead to any D08 pin

'DC-GND'

18JUL80 PN 5683433 EC 366387 PEC 366356

2650

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MAP F76D-7

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0
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```
REF.CODE F7F21801
              Power Problem
              PAGE 8 OF 11
044
(Entry Point G)
1. Press power-off key.
2.Connect CE-meter (range 15VDC)
+lead to PS102-TB01
'+5.1V PS102 to 01A-B2 IC adapt'
-lead to PS102-TB02
'DC-GND'
(ALD-YA431).
3.Press power-on switch and wait
approximately one minute.
is +5.1VDC +/-1.0V present?
  N
  045
  (Entry Point C)
  1. Press power-off key.
  2.Check connector PS102-01 for correct
  seating.
  3. Connect CE-meter (range 15VAC) to
  Connector PS102-01-001 or
  Connector PS102-01-002 or
  Connector PS102-01-003 or
  Connector PS102-01-006
  '5.4VAC CP02'
  and to
  Connector PS102-01-004 (50HZ only)
  Connector PS102-01-005 (50HZ only)
  Connector PS102-01-007 or
  Connector PS102-01-008 or
  Connector PS102-01-009 or
  Connector PS102-01-010 or
  Connector PS102-01-011 (50HZ only)
  'center'
  (ALD-YA433).
  4. Press power-on switch and wait
  approximately one minute.
  Was 5.4VAC at least momentarily present
  between above listed connectors.
```

18JUL80 PN 5683433 EC 366387 PEC 366356 2650 MAP F76D-8

2650

X

REF.CODE F7F21801

Power Problem

PAGE 9 OF 11

046

(Entry Point E)

| DANGER

| Line voltage present inside of | the PCC-box.

- 1. Press power-off switch (if not already done).
- 2.Switch PCC-CB01 off (if not already off).
- 3.Switch PCC-SW01 off (if not already off).
- 4.Open PCC-box and connect CE-meter (range 500VAC)

to connector PCC-26-001

and to connector PCC-26-002.

(ALD-YA321)

- 5. Switch PCC-CB01 on.
- 6. Observe meter, press power-on switch and wait approximately one minute.

Was line voltage at least momentarily present?

Y N

047

- 1.Switch PCC-CB01 off.
- 2.Disconnect your meter.
- 3.Close the PCC-box.
- 4.Switch PCC-CB01 on.
- Go To Map 0212, Entry Point A.

048

- 1.Switch PCC-CB01 off.
- 2.Disconnect your meter.
- 3.Close the PCC-box.
- 4. Replace power supply PS102.

Go to Page 6, Step 038, Entry Point Z.

18JUL80

PN 5683433

EC 366387

PEC 366356

2650

EC 366387

2650

PEC 366356

REF.CODE F7F21801 Power Problem PAGE 11 OF 11 056 1.Press power-off key. 2.Check and repair or replace FDS cable for +5.1V from 01A-B2YB (ALD-YC851) to 01A-B1A1 (ALD-YC843). Go to Page 6, Step 038, Entry Point Z. 057 (Entry Point F) 1.Check the accuracy of your CE-meter according to *Hints For Power MAP Usage*. (See book MI POWER). 2.Check +1.5V voltage at sense card 1 entry: Connect CE-meter (range 5VDC) +lead to 01A-A2D2-S05 'Is +1.5VDC sense +5.1V 01A-B1 A54' -lead to any D08 pin. 'DC-GND' (ALD-YB641). Is +1.5VDC +/-10% present? N Check +1.5 voltage at connector exit: 1.Connect CE-meter (range 1.5VDC) +lead to 01A-A2A2-B06. '+1.5V sense +5.1V 01A-B1 A54' -lead to any D08 pin 'DC-GND'

SZA 7.A 060 Repair wiring or replace board 01A-A2. Go to Page 6, Step 038, Entry Point Z. 061 1.Press power-off key. 2. Exchange both PC sense cards in positions 01A-A2D2 and 01A-A2C2. 3. Press power-on switch and wait approximately one minute. 4.Run voltage measurement program. Is address 97 bit 2 out of tolerance? y v 062 1.Press power-off key. 2. Replace PC sense card which is now in position 01A-A2C2. Go to Page 6, Step 038, Entry Point Z. Go to Page 9, Step 046, Entry Point E. Go To Map 0292, Entry Point A. Go To Map 0299, Entry Point A.

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MAP F76D-11

18JUL80

PN 5683433

EC 366387

PEC 366356

2650

MAP F76D-11

(ALD-YB241).

Y N

059

2.Press power-on switch and wait approximately one minute.

Is +1.5VDC +/-10% present?

1.Press power-off key.

position 01A-A2A2.

2. Replace cable with paddle card in

Go to Page 6, Step 038, Entry Point Z.

REF.CODE F7A22001 FIX 0000

POWER PROBLEM

PAGE 1 OF 6

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	А	2	001

2652

MAP F76E-1

EXIT POINTS

EXIT TH	IS MAP	TO	
PAGE	STEP	MAP	ENTRY
NUMBER	NUMBER	NUMBER	POINT
4	009	0202	Α
	005	0204	Δ

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REF.CODE F7A22001

4331

30NOV79 EC 366369 PN 8488597

PEC 366232

2652



2652

PAGE 2 OF 6

001

Symptom:

PS102 on by mistake (+5.1V, A54)

Suspected errors or FRU's
(including intermittent errors)

1 | PC sense card 1 in pos. 01A-A2D2.
2 | Relay PCC-K03.
3 | C34 wiring.
4 | BPC card in position 01A-A2B2.
5 | Diskette error.

(Entry Point A)

DANGER
Line voltage is present inside of |
the PCC-box. Always remove line |
voltage from customer's wall
outlet before part replacement in |
the PCC-box.
Line voltage is present during |
all measurements.

- 1. Press power-off switch (if not already done).
- 2.Switch PCC-CB01 off (if not already off).
- 3.Switch PCC-SW01 off (if not already off).
- 4.Open PCC-box and make a visual inspection of PCC-K03. Check for closed contact of PCC-K03.

Any error detected?

Y N

30NOV79 PN 8488597 EC 366369 PEC 366232

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Power Problem

PAGE 3 OF 6

002

- 1.Remove diskette (s) from diskette drive.
- 2.Switch PCC-CB01 on.
- 3. Press power-on switch and observe PCC-K03.

Is PCC-K03 picked?

Y N

003

- 1.Press power-off switch.
- 2.Replace PC sense card 1 in position 01A-A2D2.
- 3.Insert control diskette.
- 4. Press power-on switch and wait approximately one minute.

Is reference code F7A22001 displayed?

YN

004

Is any other reference code displayed?

Y N

005

(Entry Point Z)

1.Ensure that the PCC-box is closed. Go To Map 0204, Entry Point A.

006

Go to corresponding MAP.

007

- 1.Press power-off switch.
- 2.Insert the diagnostic diskette into the diskette drive.
- Press power-on switch and wait approximately one minute.

Is reference code F7A22001 displayed?

, 4, 4

30NOV79

PN 8488597

EC 366369

PEC 366232

2652

Dowe

Power Problem

PAGE 4 OF 6

800

- 1.Press power-off switch.
- 2.Replace control diskette.

all measurements.

Go to Page 3, Step 005, Entry Point Z.

009

DANGER

Line voltage is present inside of | the PCC-box. Always remove line | voltage from customer's wall | outlet before part replacement in | the PCC-box. | Line voltage is present during

1.Press power-off switch.
Suspect AC line voltage wiring problem from PCC-box to TR102 or sense wiring short circuit to any other voltage. Use ALD and book Maintenance Information Power and try to isolate the fault. If you are not successful,

2.Close PCC-box.

Go To Map 0202, Entry Point A.

010

Connect probe to 01A-A2B2-D09 '-Pick PCC-K03 C34' (ALD-YB421)

Is the down indicator of the probe on?

YN

011

- 1.Press power-off switch.
- 2.Replace BPC card in position 01A-A2B2.
- 3. Press power-on switch and observe PCC-K03.

Is PCC-K03 picked?

Y N

30NOV79

PN 8488597

EC 366369

PEC 366232

2652

MAP F76E-4

5 5 5 G H

2652

MAP F76E-5

DANGER | Line voltage present inside of | the PCC-box.

- 1. Press power-off switch (if not already done).
- 2.Switch PCC-CB01 off (if not already off).

012

013

- 3.Switch PCC-SW01 off (if not already off).
- 4. Remove BPC-card from position 01A-A2B2.
- 5. Perform wiring check for the following net.

Apply wiring check procedure shown in book Maintenance Information Power.

|----| | CARD |*| 01A-A2B2-B11 (ALD-YB421) | Board Wiring 1----- 1 |----| | Cable | CARD |= | PCC-10-006 (ALD-YA321) Cable KO3 |=| PCC-KO3-OO2 (ALD-YA321)

* '-Pick PCC-K03 C34'

Go to Page 3, Step 005, Entry Point Z.

30NOV79 PN 8488597 EC 366369 PEC 366232 2652 MAP F76E-5

```
REF.CODE F7A22001
               Power Problem
               PAGE 6 OF 6
  014
  1. Press power-off switch.
  2. Replace PC sense card 1 in position
  01A-A2D2.
  3. Press power-on switch.
  Connect probe to 01A-A2B2-D09
  '-Pick PCC-K03 C34'
  (ALD-YB421)
  Is the down indicator of the probe on?
  Y N
    015
     Go to Page 3, Step 005, Entry Point Z.
  016
  1. Press power-off switch.
  2. Remove BPC card from position
  01A-A2B2 and PC-sense card 1 from
  position 01A-A2D2.
  3. Perform wiring check for the following net.
  Apply the wiring check procedure shown in
  book Maintenance Information Power.
    CARD |*| 01A-A2D2-M02 (ALD-YB643)
                | Board Wiring
  | CARD |= | 01A-A2B2-D09 (ALD-YB421)
  * '-Pick PCC-K03 C34'
  If no wiring error could be found, replace the
  BPC card in position 01A-A2B2.
  Go to Page 3, Step 005, Entry Point Z.
017
1.Replace PCC-K03.
2.Switch PCC-CB01 on.
```

Go to Page 3, Step 005, Entry Point Z.

30NOV79 PN 8488597 EC 366369 PEC 366232 2652 MAP F76E-6

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POWER PROBLEM

PAGE 1 OF 9

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER
F7XX	A	1	001
F76B	H	4	016

EXIT POINTS

IS MAP	T0	
STEP NUMBER	MAP NUMBER	ENTRY POINT
037	02A0	Α
004	0200	Α
002	0204	Α
019	0292	С
010	0293	Α
033	0294	Α
035	0295	Α
036	0296	Α
034	0297	Α
038	0,299	Α
	037 004 002 019 010 033 035 036	STEP NUMBER NUMBER 037 02A0 004 0200 002 0204 019 0292 010 0293 033 0294 035 0295 036 0296 034 0297

001

Symptom:

PS102 more than one voltage out of tolerance.

Suspected errors or FRU's (including intermittent errors)	-
1 TR102. 2 PS102. 3 TR102 line voltage connections.	- 1

(Entry Point A)

- 1.Press power-off switch.
- 2. Press power-on switch and wait approximately one minute.

Is any reference code displayed?

Y N

002

(Entry Point Z)

Go To Map 0204, Entry Point A.

© Copyright IBM Corp. 1982	13SEP82	PN 4008801
REF.CODE F7C22201	EC 366582	PEC 366493
AEA2654	2654	MAP F76F-1

2 A

```
REF.CODE F7C22201
                                                                            MAP F76F-2
                                                               2654
               POWER PROBLEM
               PAGE 2 OF 9
003
Is the *base power on* indicator still on?
  004
  Go To Map 0200, Entry Point A.
005
(Entry Point C)
Are all CP's of PS102 on?
  006
  1. Switch all CP's of PS102 on.
  2. Press power-on switch and wait
   approximately one minute.
  Is any CP of PS102 tripped?
  ΥN
     007
     (Entry Point E)
     1.Press power-off switch.
     2. Check the primary fuse TR102-F01.
     Is the fuse ok?
     YN
       008
       Was the fuse TR102-F01 already
       replaced before?
       YN
          009
          Replace fuse TR102-F01.
          Go to Step 005,
          Entry Point C.
       Go To Map 0293, Entry Point A.
```

13SEP82 PN 4008801 EC 366582 PEC 366493 2654 MAP F76F-2

9 8 3

2654 MAP F76F-3

PAGE 3 OF 9

011

1.Install a jumper from 01A-A2B2-B11 '-Pick PCC-K03 C34' (ALD-YB241) to any D08 pin 'DC-GND'

NOTE: This jumper will pick PCC-K03 and PS102 will be switched on.

2.Connect CE-meter (range 15VDC) according to the following table and measure the output voltages of PS102.

Connectors of PS102 must not be disconnected).

3.Press POWER-ON switch.

(Entry Point D)

	Nominal Voltage	1	+ Lead		- Lead	1	Lower Go to Limit MAP	1
	+5.1 V	1	PS102-TB01-001	1	PS102-TB02-001	1	+4.6 V F76D	-
	9.5 V FL	1	PS102-TB03-001	1	PS102-TB04-001	1	8.2 V F769	
+	10.1 V	1	PS102-TB05-001	ı	PS102-TB06-001		÷8.2 V F76B	
-	6.8 V FL	1	PS102-TB07-001	ı	PS102-TB08-001	1	5.3 V F76A	1
-	7.1 V FL	i	PS102-09-001	1	PS102-09-002	1	5.5 V F76C	1
-	12.3 V FL	1	PS102-09-010	Ī	PS102-09-006		10.9 V F767	
-	12.3 V FL	1	PS102-09-012	ı	PS102-09-009	I	10.9 V F766	1
+	12.3 V	1	PS102-09-011	1	PS102-09-003	1	+10.9 V F768	-
-	L = Eleati	'n						1

FL - Floating voltage.

Is more than one voltage below its lower limit shown in the previous table?

13SEP82 PN 4008801

EC 366582 PEC 366493

2654 MAP F76F-3

F G 3 3

REF.CODE F7C22201

POWER PROBLEM

PAGE 4 OF 9

013

Go to Page 1, Step 002, Entry Point Z.

014

Go to MAP according to table after ENTRY POINT D.

015

Are all voltages missing?

Y N

016

(Entry Point H)

- 1.Press POWER-OFF key.
- 2.Switch PSS-CB01 off.
- 3.Check Transformer TR102-TB01 for correct connection according to customers line voltage. 'Power line PCC to TR102' (ALD-YA433).

Refer to line voltage conversion chart in ALD.

(ALD-YA021).

Is the line voltage connection correct for customer's line voltage?

Y N

017

1.Change line voltage connection TR102-TB01 according to customer's line voltage.

Refer to line voltage conversion chart in ALD

(ALD-YA021).

Disconnect jumper from
 A-A2B2-B11 to any D08 pin previously installed.

Go to Page 1, Step 002, Entry Point Z.

018

(Entry Point F)

- 1.Press POWER-OFF key.
- 2.Switch PCC-CB01 off.
- 3.Install a jumper from 01A-A2B2-B11
 'Pick PCC-K03 C34' (ALD-YB241) to any D08
 pin 'DC-GND' if not already done before.

MAP F76F-4

- 4.Ensure that screws of TR102-TB01 (if present) are tight.
- 5. Ensure that connector PCC-26 is correctly seated.
- 6.Connect CE-meter (range 500VAC) to TR102-TB01-001 and to TR102-TB01-002, 003, 004, 005 according to customer's line voltage.

(ALD-YA433).

- 7.Switch PCC-CB01 on.
- 8. Press POWER-ON key.

Is line voltage present within tolerance limit of +8% / -15% ?

N

019

Disconnect jumper from 01A-A2B2-B11 to any D08 pin previously installed.

Go To Map 0292, Entry Point C.

13SEP82

PN 4008801

EC 366582

PEC 366493

2654

MAP F76F-4

8 H

REF.CODE F7C22201

POWER PROBLEM

PAGE 5 OF 9

020

- 1.Press POWER-OFF key.
- 2.Disconnect connectors PS102-01, PS102-03, PS102-04 and PS102-09 and all FDS cables from PS102-TB01 to PS102-TB08.
- 3.Do not disconnect connectors PS102-02, PS102-05, PS102-06 and PS102-08.
- 4.Connect CE-meter (range 15VAC) according to following table and check for correct AC-Voltage from TR102 (use the cable connectors for the measurements.) (ALD-YA431)
- 5. Press POWER-ON switch.

	Nominal Voltage		Lead 1	1	Lead 2	1	Lower Limit	
	5.4 V AC 5.4 V AC 10.0 V AC 10.7 V AC 10.7 V AC 7.1 V AC 7.1 V AC 7.5 V AC 12.9 V AC 12.9 V AC		PS102-01-001 PS102-01-013 PS102-02-004 PS102-03-001 PS102-04-001 PS102-04-012 PS102-05-001 PS102-06-006 PS102-06-004 PS102-06-010		PS102-01-005 PS102-01-010 PS102-02-005 PS102-03-003 PS102-04-004 PS102-04-008 PS102-05-002 PS102-06-001 PS102-06-002 PS102-06-003		4.9 V AC 4.9 V AC 8.7 V AC 8.8 V AC 5.5 V AC 5.5 V AC 6.0 V AC 11.4 V AC 11.4 V AC	
•								

Is any AC-voltage below lower limit?

Y N

021

Go to Page 7, Step 023, Entry Point G.

13SEP82

PN 4008801

EC 366582

PEC 366493

2654

MAP F76F-5

POWER PROBLEM

PAGE 6 OF 9

022

- 1.Press POWER-OFF key.
- 2.Reconnect connectors PS102-01, PS102-03 and PS102-04.
- 3.Disconnect connectors PS102-02, PS102-05 and PS102-06.
- 4.Jumper connector on PS102 from PS102-06-005 to PS102-06-009. 'TR102-TH' (ALD-YA433).
- 5.Connect CE-meter (range 15VAC) according to following table and check for correct AC-voltage from TR102 (use the cable connectors for each measurement). (ALD-YA433)
- 6.Press POWER-ON switch.

-	Nominal Voltage		Lead 1	1	Lead 2	1	Lower Limit	1
	5.4 V AC 10.0 V AC 10.0 V AC 10.7 V AC 7.1 V AC 7.5 V AC 7.5 V AC 12.9 V AC 12.9 V AC		PS102-01-001 PS102-02-004 PS102-02-015 PS102-03-001 PS102-04-001 PS102-05-001 PS102-05-006 PS102-06-006 PS102-06-004 PS102-06-010		PS102-01-005 PS102-02-005 PS102-02-001 PS102-03-002 PS102-04-004 PS102-05-002 PS102-05-003 PS102-06-001 PS102-06-002 PS102-06-003		4.9 V AC 8.7 V AC 8.7 V AC 8.8 V AC 5.5 V AC 6.0 V AC 6.0 V AC 11.4 V AC 11.4 V AC	
								1

Is any AC-voltage below lower limit?

13SEP82

PN 4008801

EC 366582

2654

PEC 366493

.

MAP F76F-6

8 7 M N

N 6

REF.CODE F7C22201

POWER PROBLEM

PAGE 7 OF 9

023

(Entry Point G)

- 1.Press POWER-OFF key.
- 2.Reconnect connectors PS102-01, PS102-02, PS102-03, PS102-04, PS102-05 and PS102-06.
- 3.Connect CE-meter (range 15VDC) according to following table and check for correct DC-voltage from PS102.
 FDS cables and connector PS102-09 must be disconnected.
 (ALD-YA433)
- 4. Press POWER-ON switch.

Voltage Limit	
+ 5.1 V	
9.5 V FL PS102-TB03-001 PS102-TB04-001 8.2 V	
+10.1 V	
6.8 V FL PS102-TB07-001 PS102-TB08-001 5.3 V	
7.1 V FL PS102-09-001 PS102-09-002 5.5 V	
12.3 V FL PS102-09-010 PS102-09-006 10.9 V	
12.3 V FL PS102-09-012 PS102-09-009 10.9 V	
+12.3 V	

FL - Floating voltage.

Is any DC-voltage below lower limit?

ΥN

024

- 1.Press POWER-OFF key.
- 2. Reconnect all cables.
- 3.Disconnect jumper from 01A-A2B2-B11 to any D08 pin previously installed.

Go to Page 1, Step 002, Entry Point Z.

13SEP82 PN 4008801 EC 366582 PEC 366493 2654 MAP F76F-7

F

REF.CODE F7C22201 Q R S T U V 2654 MAP F76F-8 **POWER PROBLEM** PAGE 8 OF 9 025 033 1.Press POWER-OFF key. Go To Map 0294, Entry Point A. 2.Disconnect jumper from 01A-A2B2-B11 to any D08 pin 034 previously installed. Go To Map 0297, Entry Point A. 3. Replace PS102. Go to Page 1, Step 002, Entry Point Z. 035 Go To Map 0295, Entry Point A. 026 1.Press POWER-OFF key. 2.Disconnect jumper from Go To Map 0296, Entry Point A. 01A-A2B2-B11 to any D08 pin previously installed. 037 3. Replace TR102. Go To Map 02A0, Entry Point A. 4. Reconnect all cables. Go to Page 1, Step 002, Entry Point Z. 038 Go To Map 0299, Entry Point A. 027 Go to Page 4, Step 018, Entry Point F. 028 Press power-off switch. Is PS102-CP02 tripped? Y N 029 Is PS102-CP03 tripped? Y N 030 Is PS102-CP04 tripped? Y N Is PS102-CP05 tripped? YN 032 Is PS102-CP06 tripped? 13SEP82 PN 4008801 EC 366582 PEC 366493 QRSTUV 2654 MAP F76F-8

B 2 REF.CODE F7C22201 POWER PROBLEM PAGE 9 OF 9 039 Go to Page 2, Step 007, Entry Point E.

2654 MAP F76F-9

13SEP82 PN 4008801 EC 366582

PEC 366493

2654

MAP F76F-9

REF.CODE F7D30001 FIX 0000

POWER PROBLEM

PAGE 1 OF 4

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	Α	1	001

EXIT POINTS

EXIT TH	IS MAP	то	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
1	003	0200	Α
3	018	0202	Α
3	021	0204	Α

2660

MAP F796-1

001

Symptom:

PS104 +24V on 01A-A2 out of tolerance, A41.

	Suspected errors or FRU's cluding intermittent errors)
2 3 4	PC sense card 01A-A2D2. +24V DC distribution. A41 sense wiring. PS104. TR104.

(Entry Point A)

- 1.Press power off key.
- 2.Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

, M

002

Is the *Base power on* indicator on?

Y N

003

(Entry Point D)

Go To Map 0200, Entry Point A.

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REF.CODE F7D30001

18JUL80

PN 4008751

32

4331

EC 366387

PEC 366356

2660

MAP F796-1

В REF.CODE F7D30001 2660 MAP F796-2 **Power Problem** PAGE 2 OF 4 004 011 Is the reference code F7D30001 displayed? 1.Press power-off key. Y N 2.Connect CE-meter (range 50VDC) +lead to 01A-A2A3-B02 '+24V sense PS104 A-A2 A41/H01' (ALD-YB241) Is any other reference code displayed? YN -lead to any D08 pin 3. Observe meter and press power-on switch. 008 Go to Page 1, Step 003, Entry Point D. Is 24VDC at least momentarily present? N 012 Go to corresponding MAP. 1. Press power-off key. 800 2.Connect CE-meter (range 50VDC) (Entry Point C) +lead to 01A-A2B3-E14 '+24V PS104 to 01A-A2' (ALD-YC831) 1.Press power-off key. -lead to any D08 pin. 2.Exchange both PC-sense cards in positions 01A-A2D2 and 01A-A2C2. 3. Observe meter and press power-on 3. Press power-on switch and wait switch. approximately one minute. Is 24VDC at least momentarily present? Is the reference code F7D30001 displayed? N 013 009 1.Press power-off switch. 1.Press power-on key. 2.Check and repair wiring from connector 2. Replace PC-sense card in PS104-05-003 position 01A-A2C2. '+24V PS104 to 01A-A2' Go to Page 1, Step 001, Entry Point A. (ALD-YA451) to 01A-A2B3-E14 010 (ALD-YC831) 1.Press power-off key. Go to Page 3, Step 021, Entry Point Y. 2.Connect CE-meter (range 5.0VDC) +lead to 01A-A2D2-B10 014 '+1.5V sense +24V 01A-A2 A41' 1.Press power-off switch. (ALD-YB641) 2.Check and repair wiring from -lead to any D08 pin 01A-A2A3-B02 3. Observe meter and press power-on switch. '+24V sense PS104 A-A2 A41/H01' (ALD-YB241) to 01A-A2B3-E14 Is 1.5VDC at least momentarily present? '+24V PS104 to 01A-A2' (ALD-YC831) Go to Page 3, Step 021, Entry Point Y. 18JUL80 PN 4008751 PEC 366356 EC 366387 2660 MAP F796-2

```
Power Problem
               PAGE 3 OF 4
     015
                                                   022
     1.Press power-off switch.
                                                   (Entry Point Z)
     2.Connect CE-meter (range ohm X1)
     to 01A-A2D2-B10
                                                   Go to Step 021, Entry Point V.
     '+1.5V sense +24V 01A-A2 A41'
     (ALD-YB641)
                                                 023
     and to any D08 pin.
                                                 Connect CE-meter (range 50VAC)
     3.Remove PC sense card 1 form
                                                 to connector PS104-09-013
     01A-A2D2 and paddle card from
                                                 '25.2VAC'
     01A-A2A3.
                                                 and to connector PS104-09-006
                                                 'Center'
     Is the resistance below 100 ohm?
                                                 (ALD-YA421)
     Y N
                                                 Is 25.2VAC present?
       016
                                                 ΛN
       1. Press power-off switch.
       2. Replace cable and paddle card with
                                                   024
       resistor network in position 01A-A2A3
                                                   (Entry Point B)
       Go to Step 021, Entry Point Y.
                                                   1.Press power-off key.
     017
                                                   2.Check input line connection to TR104
     There is a short circuit to ground. Check
                                                   according to customers line voltage. For
     and repair wiring of signal
                                                   correct connection see
     '+1.5V sense +24V 01A-A1 A41'
                                                   (ALD-YA451)
     (ALD-YB641)
                                                   (ALD-YA021)
     or replace board 01A-A2.
                                                   3.Check connector PS104-09 and wiring
     Go to Stop 021, Entry Point V.
                                                   between TR104 and PS104.
                                                   If no error detected, replace TR104,
  018
                                                   Go to Page 1, Step 001, Entry Point A.
  Go To Map 0202, Entry Point A.
                                                 Connect CE-meter (range 50VDC) to connector
                                                 PS104-09-010
Run voltage measurement program.
                                                 '25.2VAC'
                                                 and to connector PS104-09-006
lo address 85 bit 1 out of tolerance?
                                                 'Center'
A M
                                                 (ALD-YA421)
  020
                                                 Is 25.2VAC present?
  Is any other voltage out of tolerance?
                                                   N
  A M
                                                   028
                                                   Go to Step 024, Entry Point B.
     (Entry Point Y)
    Go To Map 0204, Entry Point A.
                                                                 18JUL80
                                                                              PN 4008751
                                                                 EC 366387
                                                                              PEC 366356
                                                                 2660
                                                                              MAP F796-3
```

F G

2660

MAP F796-3

A C E 1 2 2

REF.CODE F7D30001

r

REF.CODE F7D30001

Power Problem

PAGE 4 OF 4

027

Connect CE-meter (range 50VDC) +lead to connector PS104-05-003 '+24V PS104 to 01A-A2' (ALD-YA441) -lead to PS104-05-006 'DC-GND'

Is 24VDC present?

Y N

028

1.Press power-off key. 2.Replace PS104.

Go to Page 1, Step 001, Entry Point A.

029

Go to Page 2, Step 008, Entry Point C.

18JUL80 PN 4008751 EC 366387 PEC 366356 MAP F796-4

2660

2660

MAP F796-4

REF.CODE F7D40001 FIX 0000

POWER PROBLEM

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	Α	1	001

EXIT POINTS

EXIT THIS MAP		то	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	004	0200	Α
3	014	0202	A
2	011	0204	Α
3	016	0275	Α

001

Symptom:

PS104 +12V on 01A-A2 out of tolerance, A42.

Suspected errors or FRU's (including intermittent errors)
1 PC sense card 01A-A2D2. 2 A42 sense wiring. 3 +12V DC distribution. 4 PS104. 5 TR104.

(Entry Point A)

- 1.Press power-off switch.
- 2. Switch to CE-mode at CE panel.
- 3.Press power-on switch and wait approximatley one minute.

Is the "power complete" indicator on? YN 002 Is the reference code F7D40001 displayed? © Copyright IBM Corp. 1980 REF.CODE F7D40001

18JUL80 PN 4008752 EC 366387

PEC 366356

2670

MAP F797-1

4331

REF.CODE F7D40001 Ε 2670 MAP F797-2 **Power Problem** PAGE 2 OF 3 003 009 is any other reference code displayed? 1.Press power-off key. 2.Connect CE-meter (range 15VDC) +lead to 01A-A2A3-B04 004 '+12V sense PS104 A-A2 A42/H02' Go To Map 0200, Entry Point A. (ALD-YB241) -lead to any D08 pin 005 3. Observe meter and press power-on switch. Go to corresponding MAP. Are +12VDC at least momentarily present? 003 NY (Entry Point C) 010 1.Press power-off key. 1.Press power-off key. 2.Exchange both PC-sense cards in 2.Connect CE-meter (range 15VDC) positions 01A-A2D2 and 01A-A2C2. +lead to 01A-A2D2-P11 '+12V PS104 to cards' 3. Press power-on switch and wait approximatley one minute. (ALD-YB643) -lead to any D08 pin. Is the reference code F7D40001 displayed? 3. Observe meter and press power-on YN switch. 007 Are +12VDC at least momentarily 1.Press power-off key. present? 2.Replace PC-sense card in N position 01A-A2C2. Go to Page 1, Step 001, Entry Point A. +12V wiring on board 01A-A2 defective. 800 1.Press power-off switch. 1.Press power-off key. 2.Check and repair wiring from 2.Connect CE-meter (range 5VDC) 01A-A2B5-E01 +lead to 01A-A2D2-B02 '+12V PS104 to 01A-A2 PC' '+1.5V sense +12V 01A-A2 A42' (ALD-YC831) (ALD-YB641) to 01A-A2D2-P11 -lead to any D08 pin '+12V PS104 to cards' 3. Observe meter, Press power-on switch and (ALD-Y8643) wait approximatley one minute. or replace board 01A-A2. (Entry Point Z) Are +1.5VDC at least momentarily present? Go To Map 0204, Entry Point A. 18JUL80 PN 4008752 PEC 366356 EC 366387 MAP F797-2 2670

H J REF.CODE F7D40001 2670 MAP F797-3 **Power Problem** PAGE 3 OF 3 012 018 (Entry Point B) 1. Press power-off switch. 2.Check and repair wiring from 01A-A2B5-E01 to 01A-A2A3-B04 1.Press power-off key. '+12V sense PS104 A-A2 A42/H02' 2.Check input line connection to TR104 (ALD-YB241) according to customers line voltage. For correct connection see (ALD-YA451) or Go to Page 2, Step 011, Entry Point Z. (ALD-YA021) 3.Check connector PS104-09 and wiring between TR104 and PS104. If no error detected, replace TR104. 1.Press power-off switch. 2. Replace cable and paddle card with Go to Page 1, Step 001, Entry Point A. resistor network in position 01A-A2A3. Go to Page 2, Step 011, Entry Point Z. 019 Connect CE-meter (range 15VAC) 014 to connector PS104-09-003 (Entry Point D) '12.6VAC' (ALD-YA451) Go To Map 0202, Entry Point A. and to connector PS104-09-009 'Center' 015 1.Run voltage measurement program. Are 12.6VAC present? N Is address 85 bit 2 out of tolerance? Go to Step 018, Entry Point B. Go To Map 0275, Entry Point A. 021 Connect CE-meter (range 15VDC) 017 +lead to connector PS104-06-008 '+12V PS104 to 01A-A2 B/J UC' Connect CE-meter (range 15VAC) to connector PS104-09-001 (ALD-YA451) -lead to PS104-06-005 '12.6VAC' and to connector PS104-09-009 'DC-GND' 'Center' (ALD-YA451) Are +12VDC present? N Are 12.6VAC present? 022 N 1.Press power-off key. 2.Replace PS104. Go to Page 2, Step 011, Entry Point Z. 023 Go to Page 2, Step 006, Entry Point C. 18JUL80 PN 4008752 EC 366387 PEC 366356

MAP F797-3

2670

REF.CODE F7F40201 FIX 0000 POWER PROBLEM

PAGE 1 OF 5

ENTRY POINTS

EXIT POINTS

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER
F7A0	A	1	001
F7XX	A		001

EXIT TH	IS MAP	ТО .	·
PAGE	STEP	MAP	ENTRY
NUMBER	NUMBER	NUMBER	POINT
2	004	0200	A
4	028	0202	A
5	030	0204	A

001

Symptom:

PS104 +5.1V on 01A-B1 failing, A44/H04.

Suspected errors or FRU's
(including intermittent errors)
1 PC sense card O1A-A2D2.
2 A44 sense wiring.
3 +5.1VDC distribution.
4 PS104.
5 TR104.

(Entry Point A)

- 1. Press power off key.
- 2. Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

Y N

002
Is the reference code F7F40201 displayed?
Y N

003
Is any other reference code displayed?
Y N

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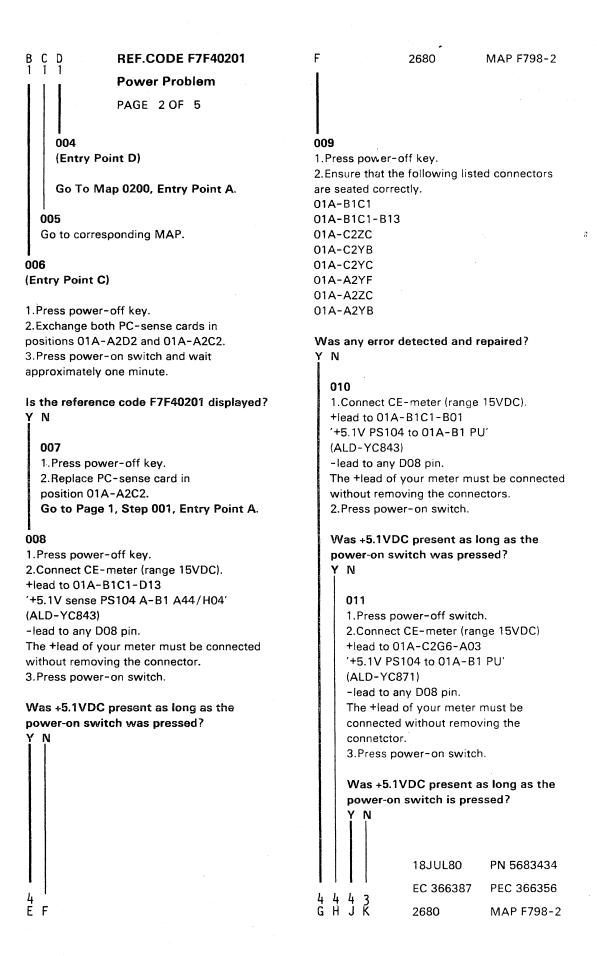
REF.CODE F7F40201

4331-2

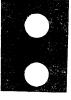
18JUL80 PN 5683434 EC 366387 PEC 366356

2680

MAP F798-1







2

REF.CODE F7F40201

Power Problem

PAGE 3 OF 5

012

- 1.Press power-off key.
- 2.Connect CE-meter

(range 15VDC)

- +lead to 01A-C2D1-B07
- '+5.1V PS104 to 01A-C2 B/J UC'
- (ALD-YC871)
- -lead to any D08 pin.
- 3. Observe meter, press power-on switch.

Was +5.1VDC present as long as the power-on switch was pressed?

Y N

013

- 1. Press power-off switch.
- 2.Connect CE-meter (range 15VDC)
- +lead to 01A-A2G6-A03
- '+5.1V PS104 to 01A-A2 MSSS'
- (ALD-YC831)
- -lead to any D08 pin.
- 3. Observe your meter and press the power-on switch.

Was 5.1VDC present as long as the power-on switch was pressed?

ΥN

014

- 1.Press power-off switch.
- 2.Check and repair FDS wiring from PS104-TB02-001
- '+5.1V PS104 to 01A-A2 MSSS'

(ALD-YA451)

to 01A-C2ZC

and to 01A-C2YB

(ALD-YC871)

Go to Page 5, Step 030, Entry Point Z.

L M

2680

MAP F798-3

015

- 1. Press power-off switch.
- 2.Connect CE-meter (range 5VDC)
- +lead to 01A-A2D1-B07
- '+5.1V PS104 to 01A-C2 B/J UC' (ALD-YC831)
- -lead to any D08 pin.
- 3. Observe your meter and press the power-on switch.

Was 5.1VDC present as long as the power-on switch is pressed?

NY

016

1.Press power-off switch.

Suspect connector problem of
01A-A2YB. If no connector problem
found, replace board 01A-A2.

Go to Page 5, Step 030, Entry Point Z.

017

- 1. Press power-off switch.
- 2.Repair or replace FDS cable from 01A-A2YB to 01A-C2YB.

Go to Page 5, Step 030, Entry Point Z.

018 (Entry Point E)

There is a wiring error on 01A-C2 from 01A-C2YB to 01A-C2ZC.

- '+5.1V PS104 to 01A-C2 B/J UC'
- 1. Press power-off switch.
- 2.Replace board 01A-C2.

(ALD-YC871)

Go to Page 5, Step 030, Entry Point Z.

18JUL80

PN 5683434

EC 366387

PEC 366356

2680

MAP F798-3

E G H J 2 2 2 2

REF.CODE F7F40201

Power Problem

PAGE 4 OF 5

019

- 1.Press power-off switch.
- 2.Check and repair or replace
- +5.1V FDS cable from 01A-C2
- '+5.1V PS104 to 01A-B1 PU'

(ALD-YC871)

to 01A-B1C1.

(ALD-YC843)

Go to Page 5, Step 030, Entry Point Z.

020

Board wiring of +5.1V net on 01A-B1 is defective.

Replace board 01A-B1.

Go to Page 5, Step 030, Entry Point Z.

021

Go to Page 5, Step 030, Entry Point Z.

022

- 1. Press power-off switch.
- 2.Connect CE-meter (range 15VDC)
- +lead to 01A-A2B4-A14
- '+5.1V sen PS104 -C2/B1 A44/H04' (ALD-YC831)
- -lead to any D08 pin.
- 3.Press power-on switch.

Was +5.1VDC present as long as the power-on switch was pressed?

Y N

023

- 1.Press power-off switch.
- 2.Check and repair or replace cable from 01A-B1C1-B13
- '+5.1V sense PS104 A-B1 A44/H04' (ALD-YC843)

to 01A-A2B4-A14

'+5.1 sen PS104 -C2/B1 A44/H04' (ALD-YC831)

Go to Page 5, Step 030, Entry Point Z.

2680

MAP F798-4

024

- 1. Press power-off key.
- 2.Connect CE-meter (range 5VDC)
- +lead to 01A-A2D2-B03
- '+1.5V sense +5.1V -C2/B1 A44'
- (ALD-YB641)
- -lead to any D08 pin
- 3. Observe meter, press power-on switch.

Was +1.5VDC present as long as the power-on switch was pressed?

ΥN

025

- 1.Press power-off key.
- 2.Connect CE-meter (range 5VDC)
- +lead to 01A-A2A3-B03
- '+5.1V sen PS104 -C2/B1 A44/H04' (ALD-YB241)
- -lead to any D08 pin
- 3. Observe meter and press power-on switch.

Was +5.1VDC present as long as the power-on switch was pressed?

Y N

026

- 1.Press power-off switch.
- 2.Check and repair wiring from
- 01A-A2B4-A14 (ALD-YC831)
- to 01A-A2A3-B03 (ALD-YB241)
- '+5.1V sen PS104 -C2/B1 A44/H04'

Go to Page 5, Step 030, Entry Point Z.

027

- 1.Press power-off switch.
- 2. Replace cable and paddle card with resistor network in position 01A-A2A3.
- Go to Page 5, Step 030, Entry Point Z.

028

Go To Map 0202, Entry Point A.

18JUL80

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EC 366387

PEC 366356

2680

MAP F798-4



REF.CODE F7F40201 Power Problem PAGE 5 OF 5

029

1. Run voltage measurement program.

Is address 85 bit 3 out of tolerance?

Y N

030

(Entry Point Z)

Go To Map 0204, Entry Point A.

031

Connect CE-meter (range 15VAC) to connector PS104-08-001 '5.4VAC' and to connector PS104-08-003 'Center' (ALD-YA451)

Is 5.4VAC present?

YN

032

(Entry Point B)

- 1.Press power-off key.
- 2.Switch PCC-CB01 off.
- 3. Check input line connection to TR104 according to customer's line voltage. For correct connection see

(ALD-YA451)

4.Check connector PS104-08 and wiring between TR104 and PS104.

If no error detected, replace TR104.

Go to Page 1, Step 001, Entry Point A.

2680

MAP F798-5

033

Connect CE-meter (range 15VAC) to connector PS104-08-011 '5.4VAC' (ALD-YA451) and to connector PS104-08-012 'Center'

Is 5.4VAC present?

YN

034

Go to Step 032, Entry Point B.

035

Connect CE-meter (range 15VDC) +lead to PS104-TB02-001 '+5.1V PS104 to 01A-A2 MSSS' -lead to PS104-TB01-001 'DC-GND' (ALD-YA451)

Is +5.1VDC present?

NA

036

1.Press power-off key.

2.Replace PS104.

Go to Page 1, Step 001, Entry Point A.

037

Go to Page 2, Step 006, Entry Point C.

18JUL80

PN 5683434

EC 366387

PEC 366356

2680

MAP F798-5

P

2690

MAP F799-1

POWER PROBLEM

PAGE 1 OF 3

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	А	1	001

EXIT POINTS

EXIT TH	IIS MAP	ТО		
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT	
2	004	0200	Α	
3	014	0202	A	
3	017	0204	Α	

003

Symptom:

PS104 +8.5V on 01A-C2 failing, A46.

Suspected errors or FRU's (including intermittent errors)
1 PC sense card 01A-A2D2. 2 A46 sense wiring. 3 ÷8.5VDC distribution. 4 PS104. 5 TR104.	

(Entry Point A)

- 1. Prass power off key.
- 2.Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approxiamtely one minute.

Is the opower completed indicator on?

N Y Is the reference code F7D40401 displayed? YN 003

Is any other reference code displayed?

© Copyright IBM Corp. 1980 REF.CODE F7D40401

4331

18JUL80 PN 4008754 EC 366387 PEC 366356 2690 MAP F799-1

REF.CODE F7D40401 2690 MAP F799-2 **Power Problem** PAGE 2 OF 3 004 009 (Entry Point D) 1.Press power-off key. 2.Connect CE-meter (range 5VDC) Go To Map 0200, Entry Point A. +lead to 01A-A2A3-B08 '+8.5V sense PS104 A-C2 A46/H06' (ALD-YB241) 005 -lead to any D08 pin Go to corresponding MAP. 3. Observe meter and press power-on switch. 006 (Entry Point C) Is +8.5VDC at least momentarily present? N 1.Press power-off key. 2. Exchange both PC-sense cards in 010 positions 01A-A2D2 and 01A-A2C2. 1.Press power-off key. 2.Connect CE-meter (range 5VDC) 3. Press power-on switch and wait *lead to 01A-C2B3-A14 approximatley one minute. '+8.5V PS104 to 01A-C2 B/J UC' Is the reference code F7D40401 displayed? (ALD-YC871) -lead to any D08 pin. YN 3. Observe meter and press power-on 007 1.Press power-off switch. 2.Replace PC-sense card in Is +8.5VDC at least momentarily present? position 01A-A2C2. N Go to Page 1, Step 001, Entry Point A. 011 1.Press power-off switch. 1.Press power-off key. 2.Check and repair wiring from connector 2.Connect CE-meter (range 5VDC) PS104-05-007 +lead to 01A-A2D2-D02 '+8.5V PS104 to 01A-A2 MSSS' '+1.5V sense +8.5V 01A-C2 A46' (ALD-YA451) (ALD-YB641) to 01A-C2B3-A14 and to 01A-C2B2-A14 -lead to any D08 pin 3. Observe meter and press power-on switch. (ALD-YC871) Go to Page 3, Step 017, Entry Point Y. Is +1.5VDC at least momentarily present? 012 1.Press power-off switch. 2.Check and repair wiring from 01A-A2A3-B08 '+8.5V sense PS104 A-C2 A46/H06' (ALD-YB241) to 01A-C2B3-A14 '+8.5V PS104 to 01A-C2 B/J UC' (ALD-YC871) Go to Page 3, Step 017, Entry Point Y. 18JUL80 PN 4008754 PEC 366356 EC 366387 2690 MAP F799-2

A E G 1 2 2 Power Problem PAGE 3 OF 3 020 013 1.Press power-off switch. (Entry Point B) 2. Replace cable and paddle card with resistor network in position 01A-A2A3. 1.Press power-off key. Go to Step 017, Entry Point Y. 2.Check input line connection to TR104 according to customers line voltage. For 014 correct connection see (ALD-YA451) Go To Map 0202, Entry Point A. 3.Check connector PS104-09 and wiring between TR104 and PS104. 015 If no error detected, replace TR104. Run voltage measurement program. Go to Page 1, Step 001, Entry Point A. Is address 85 bit 4 out of tolerance? (+8.5V PS104 01A-A2 MSSS, A46) 021 Y N Connect CE-meter (range 15VAC) to connector PS104-09-012 '8.9VAC' 016 (ALD-YA451) is any other voltage out of tolerance? and to connector PS104-09-014 'Center' 017 (Entry Point Y) Is 8.9VAC present? N Go To Map 0204, Entry Point A. 022 Go to Step 020, Entry Point B. Go to Step 017, Entry Point Y. 023 019 Connect CE-meter (range 15VDC) Do not diconnect the connectors for the +lead to connector PS104-05-007 '+8.5V PS104 to 01A-A2 MSSS' following measurements. Connect CE-meter (range 15VAC) -lead to PS104-05-012 to connector PS104-09-015 'DC-GND' '8.9VAC' (ALD-YA451) and to connector PS104-09-014 'Center' Is +8.5VDC present? (ALD-YA451) N Y Is 8.9VAC present? 024 N 1.Press power-off key. 2.Replace PS104. Go to Page 1, Step 001, Entry Point A. Go to Page 2, Step 006, Entry Point C. 18JUL80 PN 4008754 EC 366387 PEC 366356 MAP F799-3 2690

H J

2690

MAP F799-3

REF.CODE F7D40401

POWER PROBLEM

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	Α	1	001

EXIT POINTS

EXIT TH	IS MAP	то	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	011	F7A4	AA
2	005	0200	Α

001

Symptom:

PS104 +8.5V on 01A-C2 failing, A31.

Suspected errors or FRU's (including intermittent errors)
1 +8.5VDC distribution. 2 PS104. 3 TR104.

(Entry Point A)

- 1.Press power-off key.
- 2. Press power-on switch and wait approximatley one minute.

Is reference code F7A40601 displayed?

Y N

002
Is any other reference code displayed?
Y N

003
Is the power complete indicator on?
Y N

004
Is the basic check indicator on?
Y N

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REF.CODE F7A40601

2 2 2 2 2 2
A B C D E 4331

30NOV79 PN 8488550 EC 366369 PEC 366205 2700 MAP F79A-1

2700

MAP F79A-2

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B C D E REF.CODE F7A40601
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PAGE 2 OF 2

005

(Entry Point B)

Go To Map 0200, Entry Point A.

006

Press the cancel key and wait approximately one minute.

Is any reference code displayed?

ΥN

007 Go to Step 005, Entry Point B.

800

Go to corresponding MAP.

009

Suspect intermittent error. See hints in book Maintenance Information (MI) POWER.

010

Go to corresponding MAP.

011

Go To Map F7A4, Entry Point AA.

30NOV79

PN 8488550

EC 366369

PEC 366205

2700

MAP F79A-2



REF.CODE F7D40201 FIX 0000

2710

MAP F79B-1

POWER PROBLEM

ENTRY POINTS .

PAGE 1 OF 8

EXIT POINTS

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER
F7XX	A	1	001
0260	A		001

EXIT TH	IS MAP	TO	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
L _S	024	0200	А
8	049	0202	Α
4	030	0204	Α
8	050	0250	. A

001

Symptom:

PS104 -5.1V on O1A-C2 out of tolerance, A33.

	 (i		Suspected errors or FRUs cluding intermittent errors)
	-		PC sense card O1A-A2D2. -5.1VDC distribution.
	3	Ì	Load fault.
1			A33 sense wiring.
1			PS104.
l	6	1	TR104.
ļ	7	İ	Line voltage distribution.
1			

(Entry Point A)

- 1.Press power-off key.
- 2.Switch to CE-mode at CE panel.
- 3.Press power-on switch and wait approximatley one minute.

Is the opewer complete indicator on? A M **CO2** Is reference code F7D40801 displayed? © Copyright IBM Corp. 1981 REF.CODE F7D40801 5 2 2 A B C

260CT81 PN 4008755 EC 366493 PEC 366387 2710 MAP F79B-1



REF.CODE F7D40801 DE 2710 MAP F798-2 **Power Problem** PAGE 2 OF 8 003 009 Is any other reference code displayed? 1.Press power-off key. 2. Ensure that connectors on 01A-C2W3-E01 and on 01A-C2W4-E01 004 are seated correctly. Go to Page 4, Step 024, Entry Point Y. 3.Connect CE-meter (range 15VDC) -lead to 01A-C2W4-E01 005 '-5.1V PS104 to 01A-C2 K/W CA' Go to MAP for displayed reference code. (ALD-YC871) +lead to any D08 pin. 008 The -lead of your meter must be connected 1.Press power-off switch. without removing the connectors. 2. Ensure that a wire is installed from 4. Press power-on switch. 01A-C2B4-E01 to 01A-C2K3-B06 Is -5.1VDC +/- 1.0V at least momentarily and from 01A-C2K3-B06 to 01A-C2W3-E01 present? '-5.1V PS104 to 01A-C2 B/J UC' M '-5.1V sense PS1045 01A-C2 A33' (ALD-YC871) 010 Go to Page 6, Step 037, Entry Point G. Are the above mentioned wires present? Y N 011 Board wiring of -5.1V net defective. 007 1.Press power-cff key. 2. Replace board 01A-C2. Install the wires listed in the previous step. These wires must always be present if no Go to Page 4, Step 030, Entry Point Z. PS105 is installed. Go to Page 1, Step 001, Entry Point A. 012 1.Press power-off key. 800 2.Connect CE-meter (range 1.5VDC) 1.Connect CE-meter (range 15VDC) -lead to 01A-A2D2-S03 '-1.5V sense -5.1V 01A-C2 A33' -lead to 01A-C2W3-E01 (ALD-YB643) '-5.1V sense PS1045 01A-C2 A33' (ALD-YC871) +lead to any D08 pin. +lead to any D08 pin. 3. Carefully observe your meter and press The -lead of your meter must be connected power-on switch. without removing the connectors. Is -1.5VDC +/- 15% at least momentarily 2.Press power-on switch. present? Is -5.1VDC +/- 1.0V at least momentarily N present? 013 Was the voltage measured in previous step higher than 2.0VDC? 260CT81 PN 4008755 EC 366493 PEC 366387 2710 MAP F79B-2

- -

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```
MAP F79B-3
               REF.CODE F7D40801
                                                                2710
               Power Problem
               PAGE 3 OF 8
                                                        019
014
1.Press power-off key.
                                                        There is a short circuit between the
2.Connect CE-meter (range 1.5VDC)
                                                        signal
 -lead to paddle card connector exit
                                                        '-1.5V sense -5.1V 01A-C2 A33'
 01A-A2A3-B12
                                                        (ALD-YB643)
 '-1.5V sense -5.1V 01A-C2 A33'
                                                        (ALD-YB241)
 (ALD-YB241)
                                                        and DC-GND.
                                                        Check and repair board wiring or
 +lead to any D08 pin.
                                                        replace board 01A-A2.
3.Press power-on switch.
                                                        Go to Page 4, Step 030, Entry Point Z.
Ic -1.5VDC +/- 15% at least momentarily
present?
                                                     020
Y N
                                                     1.Press power-off key.
                                                     2. Repair sense wiring from
  015
                                                      01A-A2D2-S03
                                                       '-1.5V sense -5.1V 01A-C2 A33'
  1.Press power-off key.
                                                       (ALD-YB643)
  2.Connect CE-meter (range chm x1)
                                                       to 01A-A2A3-B12
   to any D08 pin and to
                                                       '-1.5V sense -5.1V 01A-C2 A33'
   01A-A2A3-B12
   '-1.5V sense -5.1V 01A-C2 A33'
                                                      (ALD-YB241)
   (ALD-YB241).
                                                       or replace board 01A-A2.
  3. Remove PC-sense card from position
                                                     Go to Page 4, Step 030, Entry Point Z.
   01A-A2D2.
                                                   021
  Is the resistance below 200 ohm?
                                                   1.Press power-off key.
                                                   2. Replace paddle card with cable in position
  N Y
                                                    01A-A2A3 (ALD-YB241).
     016
                                                   Go to Page 4, Step 030, Entry Point Z.
     (Entry Point L)
                                                022
     Repair or replace cable with paddle card
                                                1.Press power-off key.
     from board 01A-C2 to 01A-A2A3.
                                                2.Exchange both PC sense cards in positions
     Go to Pago 4, Stop 030, Entry Point Z.
                                                 01A-A2D2 and 01A-A2C2.
                                                3. Press power-on switch and wait
  017
                                                 approximately one minute.
  Do not disconnect the CE-meter.
  Remove paddle card from position
                                                Is the opower complete indicator on?
  01A-A2A3.
                                                 NY
  Is the resistance below 200 ohm?
                                                   (Entry Point H)
     018
                                                   Is any reference code displayed?
     Go to Step 016, Entry Point L.
                                                                 260CT81
                                                                              PN 4008755
                                                                 EC 366493
                                                                              PEC 366387
J K
                                                                 2710
                                                                              MAP F79B-3
```

M N 3 3

REF.CODE F7D40801

Power Problem

PAGE 4 OF 8

024

(Entry Point Y)

Go To Map 0200, Entry Point A.

025

Is reference code F7D40801 displayed?

YN

026

1.Press power-off key.

2.Replace sense PC sense card in position 01A-A2C2.

Go to Step 030, Entry Point Z.

027

Suspect power program error. Retry power on using the diagnostic diskette. If your problem is not solved,

Go to Page 8, Step 049, Entry Point X.

028

1.Press power-off key.

- 2.Replace PC sense card which is now in position 01A-A2C2.
- 3.Press power-on switch and wait approximately one minute.

Is the "power complete" indicator on?

Ϋ́N

029

Go to Page 3, Step 023, Entry Point H.

030

(Entry Point Z)

Go To Map 0204, Entry Point A.

260CT81

PN 4008755

EC 366493

PEC 366387

2710

2710

MAP F79B-4

MAP F79B-4



REF.CODE F7D40201

2710

MAP F798-5

Power Problem
PAGE 5 OF 8

031

(Entry Point E)

2. Check the following voltages for out of tolerance. Addr Bit Voltage Board Sense Corresponding														
Addr		Bit 		Vo	11	tage			Boa	rd 		Sense Line No		Corresponding MAP
85		1	١	÷24	٧	PS10	3 4	1	01A-A2	MSSS	1	A41	1	F796
85		4	->	-8.5	V	PS10	3 4	1	01A-C2	MSSS	1	A46	1	F799
97	1	5	-	5.1	V	PS10	յկ	1	01A-C2		1	A33	1	F79B
95	1	7	1	-12	٧	PS10)4]	01A-C2			A64	1	F790
97		0	1	-12	٧	PS10)!;	1	01A-A2		1	A43		F79D
85	1	3	->	5.1	V	PS10)4;	Ī	01A-C2	MSSS	1	A44	1	F798
97	1	1	-	5.1	V	PS10)4	1	01A-C2	HSSS		A45]	F 79E
97	1	7	+	8.5	V	PS10)4	I	01A-C2		1	A31	1	F79A
85	1	7	+	8.5	٧	PS10)4	1	01A-82		1	A23	1	F79F
87	1	2	+	5.1	V	PS10)4	1	01A-C2		I	A30		F7A0
85	1	2	1	÷12	V	PS10)4	1	01A-A2	MSSS	1	A42	1	F797
95	1	0		-12	V	PS10)4	1	01A-82		1	A32	Ī	F7A1
97	1	3	+	5.1	V	PS 10)4	1	01A-C1] 	A22]	F7A2
95	1	1	-	5.1	٧	PS 10)4	I	01A-B1		1	A63	1,	F7A6
97	1	6	1-	5.1	٧	PS10)4	1	01A-A1		1	A01		F7AA
A5	1	1	1	÷12	V	PS10)4	1	01A-B1		I	A48	1	F7A8
A5	1	0	1	+12	v	PS10)4	1	01A-A1		 	A13		F7A7

(Step 031 continues)

260CT81

PN 4008755

EC 366493

PEC 366387

2710

MAP F79B-5

REF.CODE F7D40801 **Power Problem** PAGE 6 OF 8 (Step 031 continued) Are all voltages below maximum limit? M 032 Is more than one voltage out of tolerance? 033 (Entry Point K) Is -5.1VDC PS104 on 01A-C2 out of tolerance (Address 97, bit 5)? / N Go to MAP according to table after **ENTRY POINT E.** Go to Page 5, Step 031, Entry Point E. 035 Connect CE-meter (range 15VDC) -lead to 01A-C2W3-E01 '-5.1V sensa PS1045 01A-C2 A33' (ALD-YC871) +Lead to any D08 pin 'DC-GND' Is -5.1VDC +/-1.0V present? Y N 036 Connect CE-meter (range 15VDC) -lead to 01A-C2W4-E01 '-5.1V PS1045 to 01A-C2 K/W CA' +-lead to any D08 pin 'DC-GND' (ALD-YC871) Is -5.1VDC +/- 1.0V present?

ST 2710 MAP F79B-6 037 (Entry Point G) 1.Press power-off key 2.Connect CE-meter (range 15VDC) -lead 01A-A2W5-E01 '-5.1V PS104 to 01A-C2 K/W CA' +lead to any D08 pin. 'DC-GND' (ALD-YC831). 3.Press power-on switch. Is -5.1VDC +/- 1.0V at least momentarily present? NY 1.Press power-off key. 2.Check and repair board wiring for -5.1V from PS104 (ALD-YC831) or replace board 01A-A2. Go to Page 4, Step 030, Entry Point Z. 1.Press power-off key. 2.Check and repair or replace cable from 01A-A2W5 (ALD-YC831) to 01A-C2W4. (ALD-YC871) Go to Page 4, Step 030, Entry Point Z. 040 1.Press power-off key. 2. Remove all cards from board 01A-C2 column K thru W. 3.Connect CE-meter (range 15VDC) -lead to 01A-C2W3-E01 '-5.1V sense PS1045 01A-C2 A33' (ALD-YC871) +lead to any D08 pin. 'DC-GND' 4.Press power-on switch. (Step 040 continues)

260CT81 PN 4008755 EC 366493 PEC 366387 2710 **MAP F79B-6**

2710

UV

MAP F79B-7

REF.CODE F7D40801

0

REF.CODE F7D40801

Power Problem

PAGE 8 OF 8

049

(Entry Point X)

Go To Map 0202, Entry Point A.

050

Go To Map 0250, Entry Point A.

051

Are all voltages below call CE-limit?

Y N

052

Go to MAP for failing voltage according to table after ENTRY POINT E of this MAP. Go to Page 5, Step 031, Entry Point E.

053

- 1.Press power-off key.
- 2.Switch CE-mode off.
- 3.Press power-on switch and wait approximately one minute.

Is any reference code displayed?

Y N

054

Go to Page 4, Step 030, Entry Point Z.

Go to corresponding MAP.

260CT81

PN 4008755

EC 366493

PEC 366387

2710

2710

MAP F79B-8

MAP F79B-8

REF.CODE F7A41001 FIX 0000 POWER PROBLEM

PAGE 1 OF 2

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	А	1	001

EXIT POINTS

EXIT TH	IS MAP	ТО			
PAGE	STEP	MAP	ENTRY		
NUMBER	NUMBER	NUMBER	POINT		
2 2	011	F7A5	AA		
	005	0200	A		

001

Symptom:

PS104 -12.0V on 01A-C2 failing, A64

| Suspected errors or FRU's | (including intermittent errors) | 1 | -12VDC distribution. | 2 | PS104. | 3 | TR104.

(Entry Point A)

- 1.Press power-off key.
- 2.Press power-on switch and wait approximately one minute.

Is reference code F7A41001 displayed?

Y N

O02
Is any reference code displayed?
Y N

O03
Is the *power complete* indicator on?
Y N

O04
Is the *basic check* indicator on?
Y N

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REF.CODE F7A41001
2 2 2 2 2 2
A B C D E 4331

30JUN80 PN 8488552 EC 366407 PEC 366369 2720 MAP F79C-1 REF.CODE F7A41001

Power Problem

PAGE 2 OF 2

005

(Entry Point B)

Go To Map 0200, Entry Point A.

006

ABCDE

Press cancel key and wait approximately on minute.

Is any reference code displayed?

'N

007

Go to Step 005, Entry Point B.

800

Go to corresponding MAP.

009

Suspect intermittent error. See hints in book Maintenance Information (MI) POWER.

กาก

Go to corresponding MAP.

011

Go To Map F7A5, Entry Point AA.

30JUN80

PN 8488552

EC 366407

PEC 366369

2720

MAP F79C-2

REF.CODE F7D41201 FIX 0000

POWER PROBLEM

PAGE 1 OF 4

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	А	1	001

EXIT POINTS

EXIT TH	IS MAP	T0	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	004	0200	А
3	021	0204	Α
3	015	0275	Α

2730

MAP F79D-1

001

Symptom:

PS104 -12V on 01A-A2 failing, A43.

Suspected errors or FRU's (including intermittent errors) | 1 | PC sense card 01A-A2D2. 2 | A43 sense wiring. 3 | -12VDC distribution. 4 | PS104. 5 | TR104.

(Entry Point A)

- 1.Press power-off switch.
- 2. Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approximately one minute.

Is the "power complete" indicator on?

NY Is the reference code F7D41201 displayed? YN Is any other reference code displayed? NY © Copyright IBM Corp. 1980 REF.CODE F7D41201

4331

18JUL80 PN 4008756 EC 366387 PEC 366356 2730 MAP F79D-1 B C D REF.CODE F7D41201 2730 MAP F79D-2 **Power Problem** PAGE 2 OF 4 004 009 (Entry Point G) 1. Press power-off key. 2.Connect CE-meter (range 15VDC) Go To Map 0200, Entry Point A. -lead to 01A-A2A3-B05 '-12V sense PS104 A-A2 A43/H03' 005 (ALD-YB241) Go to corresponding MAP. +lead to any D08 pin 3. Observe meter and press power-on switch. (Entry Point C) Is -12VDC at least momentarily present? Y N 1.Press power-off key. 2.Exchange both PC-sense cards in 010 positions 01A-A2D2 and 01A-A2C2. 1. Press power-off key. 3. Press power-on switch and wait 2.Connect CE-meter (range 15VDC) approximatley one minute. -lead to 01A-A2D2-P06 '-12V PS104 to cards' Is the reference code F7D41201 displayed? (ALD-YB643) YN +lead to any D08 pin. 3. Observe meter and press power-on 007 switch. 1. Press power-off switch. 2. Replace PC-sense card in Is -12VDC at least momentarily present? position 01A-A2C2. Go to Page 1, Step 001, Entry Point A. 011 800 1.Press power-off key. 1.Press power-off key. 2.Check and repair wiring from 2.Connect CE-meter (range 5VDC) 01A-A2B3-E01 -lead to 01A-A2D2-P12 '-12V PS104 to 01A-A2 PC' '-1.5V sense -12V 01A-A2 A43' (ALD-YC831) (ALD-YB643) to 01A-A2D2-P06 +lead to any D08 pin (ALD-YB643) 3. Observe meter and press power-on switch. or replace board 01A-A2. Is -1.5VDC at least momentarily present? (Entry Point Y) 3. Press power-on switch and wait approximately one minute. Is "power complete" indicator on? 18JUL80 PN 4008756 EC 366387 PEC 366356

2730

MAP F79D-2

__

A E G H J K REF.CODE F7D41201 1 2 2 2 2 2 L M 2730 MAP F79D-3 **Power Problem** PAGE 3 OF 4 012 020 Is any other voltage out of telerance? Is any reference code NV displayed? N021 Go To Map 0204, Entry Point A. 013 Go to Page 2, Step 004, Entry Point G. 022 Go to Page 2, Step 011, Entry Point V. 014 Go to MAP for displayed Connect CE-meter (range 15VAC) reference code. to connector PS104-09-001 015 '12.6VAC' and to connector PS104-09-009 Go To Map 0275, Entry Point A. 'Center' 016 (ALD-YA451) 1.Press power-off switch. 2.Check and repair wiring from Is 12.6VAC present? 01A-A2A3-B05 NY '-12V sense PS104 A-A2 A43/H03' 024 (ALD-YB241) (Entry Point B) to 01A-A2D2-P06 '-12V PS104 to cards' (ALD-YB643) 1.Press power-off key. Go to Page 2, Step 011, Entry Point V. 2.Check input line connection to TR104 according to customers line voltage. For correct connection see 017 1.Press power-off switch. (ALD-YA451) 2. Replace cable and paddle card with 3. Check connector PS104-09 and wiring resistor network in position 01A-A2A3. between TR104 and PS104. Go to Page 2, Step 011, Entry Point Y. If no error detected, replace TR104. Go to Page 1, Step 001, Entry Point A. 018 Suspect wiring problem. 025 Perform "Wiring Check Procedure" Connect CE-meter (range 15VAC) according to hints in book Maintenance to connector PS104-09-003 Information (MI) POWER. '12.6VAC' and to connector PS104-09-009 'Center' 019 (ALD-YA451) 1. Run voltage measurement program. Is address 97 bit 0 out of tolerance? Is 12.6VAC present? (-12V PS104, 01A-A2, A43) Y N 18JUL80 PN 4008756 PEC 366356 EC 366387 2730 MAP F79D-3 029 Go to Page 2, Step 006, Entry Point C.

Go to Page 1, Step 001, Entry Point A.

18JUL80 PN 4008756 EC 366387 PEC 366356 2730 MAP F79D-4

2730

MAP F79D-4

REF.CODE F7D41401 FIX 0000

POWER PROBLEM

PAGE 1 OF 5

ENTRY POINTS

EXIT POINTS

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER
F7XX	A	1	001
0260	A		001

EXIT TH	IS MAP	ТО			
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT		
2 5 5 3 5	006 040 044 026 042	0200 0204 0260 0275 0275	A A A A		

2740

MAP F79E-1

001

Symptom:

PS104 -5.1V on 01A-C2 failing, A45/A47.

Suspected errors or FRU's (including intermittent errors)					
1 PC sense card in pos. 01A-A2D2. 2 PC sense card in pos. 01A-A2C2. 3 A45 sense wiring. 4 A47 sense wiring. 5 -5.1VDC distibution. 6 PS104. 7 TR104.	-				

(Entry Point A)

Note:

NY

The -5.1V from PS104 (sense points A45 and A47) are also used by the power-on-test for a DAC-test of both PC-sense cards.

- 1. Press power-off key.
- 2. Press power-on switch and wait approximately one minute.

Is the reference code F7D41401 displayed?

© Copyright IBM Corp. 1980 REF.CODE F7D41401 2 2 A B 4331

18JUL80 PN 4008757 EC 366387 PEC 366356 2740 MAP F79E-1

REF.CODE F7D41401 Ε 2740 MAP F79E-2 **Power Problem** PAGE 2 OF 5 002 009 Go to MAP for displayed reference code. 1.Press power-off switch. 2.Replace PC-sense card in 003 position 01A-A2C2. 1.Switch to CE-mode at CE panel. 3.Press power-on switch and wait 2. Press power-on switch and wait approximately one minute. approximately one minute. Is reference code F7D41401 displayed? Is the "power complete" indicator on? Y N YN 010 004 Is any other reference code displayed? Is the reference code F7D41401 N Y displayed? NY Go to Page 5, Step 040, Entry Point Z. Is any other reference code displayed? 012 Y N Go to corresponding MAP. 006 013 (Entry Point H) 1.Press power-off switch. 2.Replace PC-sense card in position Go To Map 0200, Entry Point A. 01A-A2D2. 3. Press power-on switch and wait approximately one minute. Go to corresponding MAP. Is reference code F7D41401 displayed? 800 N (Entry Point C) 014 1.Press power-off key. Is any other reference code displayed? 2. Exchange both PC-sense cards in YN positions 01A-A2D2 and 01A-A2C2. 015 3. Press power-on switch and wait approximately one minute. Go to Page 5, Step 040, Entry Point Z. Is the reference code F7D41401 016 displayed? Go to corresponding MAP. Go to Page 1, Step 001, Entry Point A. 18JUL80 PN 4008757 EC 366387 PEC 366356

2740

MAP F79E-2

D 2	REF.CODE F7D41401	G		2740	MAP F79E-3
COLUMN	Power Problem				
	PAGE 3 OF 5				
		(:	Step 020 cor	ntinued)	
018					
(Entry Point D)			N		
-lead to 01A-A '-1.5V sense -5 (ALD-YB643) -lead to any D0 3.Observe meter Is -1.5VDC presswitch is press Y N 019 1.Press powe 2.Connect C6 -lead to 01A	neter (range 5VDC) 2D2-S04 5.1V 01A-C2 A45' 8 pin or and press power-on switch. sent as long as the power on ed? er-off key. E-meter (range 5VDC) -A2A3-B07 PS104 A-C2 A45/H05'		O22 Go to PO23 Is reference Y IN O24 Go to PO25	ca coda F7D4 aga 2, Stap 0	isplayed? 86, Entry Point H. 1401 displayed? 98, Entry Point C. reference code.
+lead to any	•	1		275, Entry Po	oint A.
#	eter and press power-on				
swit ch .		027		. 66	
on switch is Y N 020 Check and connector	present as long as the power pressed? I repair wiring from 01A-A2B5-A01 ase PS104 A-A2 A45/H05'	2.Cd 01 A '-1. (ALI and	-A2A3-D09 5V sense -5 D-YB241) to any D08 (bserve your l	eter (range 1. (-) .1V 01A-C2 A	45'
(ALD-YC8	331)				tho power on
(ALD-YB2 or replace (Entry Poil Press pow approxima	nse PS104 A-A2 A45/H05′ 241) board 01A-A2.	SWin	tch is prosso J		
		The state of the s		18JUL80	PN 4008757
4		<u>.</u> .	,	EC 366387	PEC 366356
ŕ G		4 4 H J	İ	2740	MAP F79E-3

18JUL80

2740

EC 366387

PN 4008757

PEC 366356

MAP F79E-4

2740

MAP F79E-5

Power Problem

PAGE 5 OF 5

038

1.Press power-off switch.

2.Replace the PC sense card 2 in position 01A-A2C2.

Go to Step 040, Entry Point Z.

039

1.Run voltage measurement program.

Is any other voltage out of tolerance?

Y N

040

(Entry Point Z)

Go To Map 0204, Entry Point A.

041

Is one of the following listed voltages out of tolerance?

97 5 -5.1V 104 or 105 A33 01A-C2 K/W 95 1 -5.1V 104 A63 01A-B1 97 6 -5.1V 104 A01 01A-A1 97 1 -5.1V 104 A45 01A-C2 B/J	1	Addr	.	Bit		Voltage	1	PWR	supply	1	Sense	1	Board	 1
		95 97	1	1	1	-5.1V -5.1V		104 104		1	A63 A01	1	01A-B1 01A-A1	1

N

042

Go To Map 0275, Entry Point A.

043

Is only address 97 bit 1 out of tolerance?

'-5.1V sense PS104 01A-C2 A45'

YN

044

Go To Map 0260, Entry Point A.

045

Go to Page 2, Step 008, Entry Point C.

18JUL80

PN 4008757

EC 366387

PEC 366356

2740

MAP F79E-5

POWER PROBLEM

PAGE 1 OF 4

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	А	1	001

EXIT POINTS

EXIT TH	IS MAP	TO TO	
PAGE	STEP	MAP	ENTRY
NUMBER	NUMBER	NUMBER	POINT
2	005	0200	A
4	031	0202	A
4	034	0204	A

001

Symptom:

PS104 + 8.5V on 01A-B2 out of tolerance,

A23.

Note:

+8.5V on 01A-C2 are ok.

-	 i)		Suspected errors or FRU's cluding intermittent errors)
		İ	PC sense card O1A-A2D2. DC distribution from O1A-C2 to 01A-B2.
	3	i 	A23 sense wiring.

(Entry Point A)

- 1.Press power-off key.
- 2. Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

O02
Is reference code F7A41601 displayed?
Y N

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REF.CODE F7A41601
4 2 2
A B C 4331

30JUN80 PN 8488555 EC 366407 PEC 366205 2750 MAP F79F-1

REF.CODE F7A41601 2750 MAP F79F-2 **Power Problem** PAGE 2 OF 4 003 011 Is any reference code displayed? 1.Press power-off key. Y N 2.Ensure that connectors on 01A-B2B3-A01 and 004 on 01A-B2W5-A01 are seated correctly. Is the basic check indicator on? 3.Connect CE-meter (range 15VDC) YN +lead to 01A-B2W5-A01 '+8.5V PS1045 to 01A-B2 ACA' 005 (ALD-YC851) (Entry Point Y) -lead to any D08 pin. The +lead of your meter must be connected Go To Map 0200, Entry Point A. without removing the connectors. 4. Press power-on switch. Press cancel key and wait approximately +8.5VDC at least momentarily present? one minute. Is any reference code displayed? 012 1.Press power-off key 2.Connect CE-meter (range 15VDC) 007 +lead to 01A-C2B4-A14 Go to Step 005, Entry Point Y. '+8.5V PS1045 to 01A-B2 ACA' (ALD-YC871) 800 -lead to any D08 pin. Go to corresponding MAP. 3. Press power-on switch. +8.5VDC at least momentarily present? Go to MAP for displayed reference code. 010 013 1Press power-off key. 1.Press power-off switch. 2.Connect CE-meter (range 15VDC) 2.Check and repair +8.5V wiring on board +lead to 01A-B2B3-A01 01A-C2 (ALD-YC871) '+8.5V sense PS1045 01A-B2 A23' (ALD-YC851) or replace board 01A-C2. -lead to any D08 pin. Go to Page 4, Step 034, Entry Point Z. The +lead of your meter must be connected without removing the connectors. 3. Press power-on switch. +8.5VDC at least momentarily present? **30JUN80** PN 8488555 EC 366407 PEC 366205 2750 MAP F79F-2

REF.CODE F7A41601 K 2750 MAP F79F-3 Power Problem' PAGE 3 OF 4 014 018 1.Press power-off switch. 1. Press power-off key. 2.Check and repair or replace cable for 2.Connect CE-meter (range 1.5VDC) +8.5V from board 01A-C2B4-A14 + lead to paddle card connector exit '+8.5V PS1045 to 01A-B2 ACA' 01A-A2A2-B08 (ALD-YC871) '+1.5V sense +8.5V 01A-B2 A23' to board 01A-B2W5-A01 (ALD-YB241) '+8.5V PS1045 to 01A-B2 ACA' -lead to any D08 pin. (ALD-YC851) 3. Press power-on switch. Go to Page 4, Step 034, Entry Point Z. +1.5VDC at least momentarily present? 015 YN Board wiring of +8.5V net defective. 019 1. Press power-off key. 2.Check and repair +8.5V board wiring or 1.Press power-off key. 2.Connect CE-meter replace board 01A-B2. Go to Page 4, Step 034, Entry Point Z. (range ohm X1) to any D08 pin and to 016 01A-A2A2-B08. '+1.5V sense +8.5V 01A-B2 A23' 1. Press power-off key. 2.Connect CE-meter (range 1.5VDC) (ALD-YB241). +lead to 01A-A2D2-B05 3.Remove PC-sense card from position '+1.5V sense +8.5V 01A-B2 A23' 01A-A2D2. (ALD-YB641) -lead to any D08 pin. Is the resistance below 200 ohm? 2. Press power-on switch. NY +1.5VDC at least momentarily present? 020 (Entry Point L) 017 1. Press power-off key. Is the voltage measured in previous step 2. Repair or replace cable with paddle card higher than 2.0VDC? from board 01A-B2 to Y N 01A-A2A2. Go to Page 4, Step 034, Entry Point Z. 1.Do not disconnect the CE-meter. 2. Remove paddle card from position 01A-A2A2. Is the resistance below 200 ohm? N Go to Step 020, Entry Point L. 30JUN80 PN 8488555 EC 366407 PEC 366205 2750 MAP F79F-3



PEC 366205

MAP F79F-4

2750

REF.CODE F7A41601 2750 MAP F79F-4 **Power Problem** PAGE 4 OF 4 028 There is a short circuit between the 1.Press power-off key. signal 2. Replace PC sense card which is now '+1.5V sense +8.5V 01A-B2 A23' plugged in position 01A-C2. (ALD-YB641) Go to Step 034, Entry Point Z. (ALD-YB241) and DC-GND. 029 Check and repair board wiring or Reference code F7A41601 displayed? replace board 01A-A2. Go to Step 034, Entry Point Z. 030 024 1.Press power-off key. 1.Press power-off key. 2. Replace sense card in position 2.Repair sense wiring from 01A-A2C2 01A-A1D2-B05 Go to Step 034, Entry Point Z. '+1.5V sense +8.5V 01A-B2 A23' (ALD-YB641) 031 to 01A-A2A2-B08 Suspect power program error. '+1.5V sense +8.5V 01A-B2 A23' Go To Map 0202, Entry Point A. (ALD-YB241) or replace board 01A-A2. 032 1. Press power-off key. 2. Replace PC sense card which is now in 025 1.Press power-off key. position 01A-A2C2. 2. Replace paddle card with cable in position 3. Press power-on switch and wait 01A-A2A2. approximately one minute. Go to Step 034, Entry Point Z. Is the "power complete" indicator on? 026 Y N 1. Press power-off key. 2. Exchange both PC sense cards in positions 01A-A2D2 and 01A-A2C2. Go to Step 027, Entry Point H. 3. Press power-on switch and wait approximatley one minute. 034 (Entry Point Z) Is the *power complete* indicator on? Y N Go To Map 0204, Entry Point A. 027 035 (Entry Point H) 1.Press power-off key 2. Suspect faulty paddle card in position Any reference code displayed? 01A-A2A2. Replace cable with paddle card. Go to Step 034, Entry Point Z. 30JUN80 PN 8488555 EC 366407

N P O



REF.CODE F7D41801 FIX 0000

POWER PROBLEM

PAGE 1 OF 8

ENTRY POINTS

EXIT POINTS

		· · · · · · · · · · · · · · · · · · ·	
FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	А	1	001

EXIT TH	IS MAP	T0	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
3 8 4 8	022 047 028 048	0200 0202 0204 0278	A A A

2760

MAP F7A0-1

001 Symptom. PS104 +5.1V on 01A-C2 out of tolerance, A30.

 (in	Suspected errors or FRU's ncluding intermittent errors)
2 3 4 5 6	PC sense card 01A-A2D2. +5.1VDC distribution. Load fault. A30 sense wiring. PS104. TR104. Line voltage distribution.

(Entry Point A)

- 1.Press power-off key.
- 2. Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approximately one minute.

Is the "power complete" indicator on?

Y N

C02
Is reference code F7D41801 diaplayed?

Y N

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REF.CODE F7D41801

A B C

260CT81 PN 4008758 EC 366493 PEC 366387 2760 MAP F7A0-1



REF.CODE F7D41801 DE 2760 MAP F7A0-2 . **Power Problem** PAGE 2 OF 8 003 is any other reference code displayed? Board wiring of +5.1V net on 01A-C2 is Y N defective. 1.Press power-off key. Replace board 01A-C2. Go to Page 3, Step 022, Entry Point Y. Go to Page 4, Step 028, Entry Point Z. 005 010 Go to MAP for displayed reference code. 1.Press power-off key. 2.Connect CE-meter (range 1.5VDC) **CO6** +lead to 01A-A2D2-D11 1.Press power-off key. '+1.5V sense +5.1V 01A-C2 A30' 2.Connect CE-meter (ALD-YB641) (range 15VDC) -lead to any D08 pin. +lead to 01A-C2W2-E14 3. Carefully observe your meter and press '+5.1V sense PS1045 01A-C2 A30' power-on switch. (ALD-YC871) -lead to any D08 pin. Is +1.5VDC +/-15% present as long as the The *lead of your mater must be connected power-on switch is pressed? without removing the connector. 3.Press power-on switch. 011 is +5.1VDC +/-1.0V present as long as the Was the voltage measured in previous power-on switch is pressed? step higher than 2.0VDC? YN YN 007 012 1. Press power-off key. 1.Press power-off key. 2. Ensure that connectors on 2.Connect CE-meter (range 1.5VDC) 01A-C2W2-E14 and on 01A-C2YF are +lead to paddle card connector exit seated correctly. 01A-A2A3-B11 3.Connect CE-meter (range 15VDC) '+1.5V sense +5.1V 01A-C2 A30' +lead to 01A-C2Q1-C07 (ALD-YB241) '+5.1V PS1045 to 01A-C2 K/W CA' -lead to any D08 pin. (ALD-YC871) 3. Press power-on switch. -lead to any D08 pin. Is +1.5VDC +/-15% present as long as The +lead of your meter must be connected without removing the connectors. the power-on switch is pressed? 4.Press power-on switch. is +5.1VDC +/-1.0V present as long as the power-on switch is pressed? Y N Go to Page 6, Step 035, Entry Point G. 260CT81 PN 4008758 EC 366493 PEC 366387 2760 **MAP F7A0-2**

REF.CODE F7D41801 2760 **MAP F7A0-3** J 2 **Power Problem** PAGE 3 OF 8 013 018 1.Press Power-off key. 1.Press power-off key. 2.Connect CE-meter (range ohm x1) to any D08 2.Repair sense wiring form pin and to 01A-A2A3-B11. 01A-A2D2-D11 '+1.5V sense +5.1V 01A-C2 A30' '+1.5V sense +5.1V 01A-C2 A30' (ALD-YB241). (ALD-YB641) 3. Remove PC-sense card from position to 01A-A2A3-B11 '+1.5V sense +5.1V 01A-C2 A30' 01A-A2D2. (ALD-YB241) or replace board 01A-A2. Is the resistance below 200 ohm? Go to Page 4, Step 028, Entry Point Z. 014 019 (Entry Point L) 1. Press power-off key. 2.Replace paddle card with cable in position 01A-A2A3 1.Press power-off key. 2.Repair or replace cable with paddle card (ALD-YB241). from 01A-C2W2-E14 Go to Page 4, Stop 028, Entry Point Z. (ALD-YC871) to 01A-A2A3-B11 020 (ALD-YB241). 1.Press power-off key. Go to Pago 4, Stop 028, Entry Point Z. 2.Exchange both PC sense cards in positions 01A-A2D2 and 01A-A2C2. 3. Press power-on switch and wait Do not disconnect the CE-meter. approximately one minute. Remove paddle card from position 01A-A2A3. Is the "power complete" indicator on? is the resistance below 200 ohm? Y N NY 021 (Entry Point H) Go to Step 014, Entry Point L. Is any reference code displayed? Y N There is a short circuit between the signal '+1.5V sense +5.1V 01A-C2 A30' 022 (ALD-YB641) (Entry Point Y) (ALD-YB241) and DC-GND. Go To Map 0200, Entry Point A. Check and repair board wiring or replace board 01A-A2. Go to Page 4, Step 028, Entry Point Z. Is reference code F7D41801 displayed? 260CT81 PN 4008758 EC 366493 PEC 366387 2760 **MAP F7A0-3**

1

L M REF.CODE F7D41801 3 3 Power Problem

PAGE 4 OF 8

024

1.Press power-off key.
2.Replace PC sense card in position 01A-A2C2.
Go to Step 028, Entry Point Z.

025

Suspect power program error. Retry power on with the diagnostic diskette. If the problem is not solved,
Go to Page 8, Step 047, Entry Point X.

026

- 1.Press power-off key.
- 2.Replace PC sense card which is now in position 01A-A2C2.
- 3.Press power-on switch and wait approximately one minute.

Is the opower complete indicator on?

ÅΜ

027

Go to Page 3, Step 021, Entry Point H.

028

(Entry Point Z)

Go To Map 0204, Entry Point A.

260CT81

PN 4008758

EC 366493

PEC 366387

2760

2760

MAP F7A0-4

MAP F7A0-4

REF.CODE F7D41801

2760

MAP F7A0-5

Power Problem
PAGE 5 OF 8

029 (Entry Point E)

	ltage measure the following			t of to	lerance.
Addr Bit	s Voltages 	Boar	d l	sense line	Corresponding MAP
85 1	+24V PS104	01A-A2	l	A41	l F796
85 4	l÷8.5V PS104	01A-C2	MSSSI	A46	l F799
97 l 5	1-5.1V PS104	01A-C2	1	A33	l F79B
95 l 7	-12V PS104	01A-C2		A64	l F79C
97 0	-12V PS104	01A-A2	1	A43	F79D
85 3 ×0R	l÷5.1V PS104	01A-C2	MSSSI	Д44	F798
85 3	1+5.1V PS104	01A-B1	MSSSI	дць	l F798
97 1	1-5.1V PS104	01A-C2	MSSSI	A45	l F79E
97 7	I+8.5V PS104	01A-C2		A31	l F79A
85 7	l÷8.5V PS104	01A-B2		A23	F79F
87 2	l÷5.1V PS104	01A-C2		A30	l F7A0
85 2	+12V PS104	01A-A2	MSSSI	A42	l F797
95 I 0	-12V PS104	01A-82		A32	F7A1
97 I 3	i+5.1V PS104	OIA-CI	1	A22	F7A2
95 l 1	1-5.1V PS104	01A-B1		A63	F7A6
97 6	I-5.1V PS104	01A-A1		A01	l F7AA
A5 1	+12V PS104	01A-B1		A48	l F7A8

(Step 029 continues)

260CT81 PN 4008758 EC 366493 PEC 366387

2760 MAP F7A0-5



Power Problem PAGE 6 OF 8 (Step 029 continued) Are all voltages below maximum limit? 035 Y N (Entry Point G) 030 1.Press power-off key. Is more than one voltage out of tolerance? 2.Connect CE-meter (range 15VDC) +lead to connector 01A-A2T6-B03. '+5.1V PS104 01A-C2 K/W CA' 031 -lead to any D08 pin. (Entry Point K) 'DC-GND' (ALD-YC831) Is address 87, bit 2 out of tolerance? 3.Press power-on switch. (+5.1V PS104, 01A-C2, A30) N Y Is +5.1VDC +/-1.0V present as long as the power-on switch is pressed? 032 N Y Go to MAP according to table after ENTRY POINT E. 038 Go to Page 5, Step 029, Entry Point E. Suspect connector problem of 01A-A2ZG. If no error found, press 033 power-off key and replace board Connect CE-meter (range 15VDC) 01A-A2. +lead to 01A-C2W2-E14 Go to Page 4, Step 628, Entry Point Z. '+5.1V sense PS1045 01A-C2 A30' (ALD-YC871) 037 -lead to any D08 pin 1.Press power-off key. 'DC-GND' 2.Check and reair or replace cable from 01A-A2ZG Is +5.1VDC +/-1.0V present? (ALD-YC831) to 01A-C2YF. (ALD-YC871) 034 Go to Page 4, Step 028, Entry Point Z. Connect CE-meter (range 15VDC) +lead to 01A-C2Q1-C07 038 '+5.1V PS1045 to 01A-C2 K/W CA' 1.Press power-off key. -lead to any D08 pin 2.Remove all cards from board 01A-C2 column 'DC-GND' K thru W. (ALD-YC871) 3.Connect CE-meter (range 15VDC) +lead to 01A-C2W2-E14 Is +5.1VDC +/-1.0V present? '+5.1V sense PS1045 01A-C2 A30' (ALD-YC871) -lead to any D08 pin. 4. Press power-on switch. (Step 038 continues) PN 4008758 26OCT81 EC 366493 PEC 366387 **MAP F7A0-6** 2760

R S

2760

MAP F7A0-6

REF.CODE F7D41801

1.

Power Problem PAGE 7 OF 8 (Step 038 continued) Is +5.1VDC +/-1.0V present as long as the 042 power-on switch is pressed? Check +1.5 voltage at connector exit: 1.Connect CE-meter (range 1.5VDC) 039 +lead to 01A-A2A3-B11. '+1.5V sense +5.1V 01A-C2 A30' 1.Press power-off key. (ALD-YB241). 2.Suspect sense wiring error on board 01A-C2. -lead to any D08 pin 'DC-GND' Repair board wiring or replace board 01A-C2. 2.Press power-on switch. 3.Press power-on switch. Is +1.5VDC +/-15% present as long as the Go to Page 5, Step 029, Entry Point E. power-on cwitch is pressed? 040 Y N Suspect overload condition caused by a faulty card. 1. Press power-off key. 1.Press power-off key. 2. Replug cards step by step. After each step 2. Rapair or replace cable with paddle card press power on switch and observe your from board 01A-C2 to 01A-A2A3. Go to Page 4, Stop 028, Entry Point Z. meter reading. Replace the defective card which caused incorrect meter reading at the sense point. 044 3. Press power-on switch. 1. Press power-off key. Go to Page 5, Step 029, Entry Point E. 2. Repair wiring or replace board 01A-A2. Go to Page 4, Step 026, Entry Point Z. 041 (Entry Point F) 045 1. Press power-off key. 1.Check the accuracy of your CE-meter 2.Exchange both PC sense cards in positions according to "Hints For Power MAP Usage" in 01A-A2D2 and 01A-A2C2. book MI POWER, Vol.16. 3. Press power-on switch and wait 2.Check +1.5V voltage at sense card 2 entry: approximately one minute. Connect CE-meter (range 5VDC) 4. Run voltage measurement program. +lead to 01A-A2D2-B11 '+1.5V sense +5.1V 01A-C2 A30' Is address 87 bit 2 out of tolerance? -lead to any D08 pin. (+5.1V PS104 01A-C2 A30) 'DC-GND' ΥN (ALD-YB641). DAR Is +1.5VDC +/-15% present as long as the 1.Press power-off key. power-on switch is pressed? 2.Replace PC sense card which is now in position 01A-A2C2. Go to Page 4, Step 028, Entry Point Z. 260CT81 PN 4008758 EC 366493 PEC 366387 2760 MAP F7A0-7

TU

2760

MAP F7A0-7

REF.CODE F7D41801

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REF.CODE F7D41801
                                                                2760
                                                                            MAP F7A0-8
               Power Problem
               PAGE 8 OF 8
    047
    (Entry Point X)
     Go To Map 0202, Entry Point A.
  Go To Map 0278, Entry Point A.
049
Are all voltages below call CE-limits?
N Y
  Go to MAP for failing voltage according to
  table after ENTRY POINT E of this MAP.
  Go to Page 5, Step 029, Entry Point E.
051
1.Press power-off key.
2.Switch CE-mode off.
3.Press power-on switch and wait
 approximately one minute.
Is any reference code displayed?
ΥN
  052
  Go to Page 4, Step 028, Entry Point Z.
053
```

Go to corresponding MAP.

260CT81 PN 4008758 EC 366493 PEC 366387 2760 MAP F7AO-8

2770

MAP F7A1-1

POWER PROBLEM

PAGE 1 OF 4

ENTRY POINTS

EXI	1	۲	O	IN	18

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	Α,	1	001

EXIT TH	IS MAP	ТО	
PAGE	STEP	MAP	ENTRY
NUMBER	NUMBER	NUMBER	POINT
2	004	0200	A
4	027	0202	A
4	030	0204	A

001

Symptom:

PS104 -12V on 01A-B2 out of tolerance, A32.

Note:

-12V on 01A-C2 are ok.

2 DC distribution from 01A-C2 to
1 PC sense card 01A-A2D2. 2 DC distribution from 01A-C2 to
01A-B2.
3 A32 sense wiring.

(Entry Point A)

- 1.Press power-off key.
- 2.Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approximately one minute.

Is the power complete indicator on?

Y N

002
Is reference code F7A42001 displayed?
Y N

003
Is any other reference code displayed?
Y N

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REF.CODE F7A42001

A B C D 4331

15MAR79 PN 8488557 EC 366205 PEC 366189 2770 MAP F7A1-1

C D Ref.C.F7A42001 **Power Problem** PAGE 2 OF 4 004 (Entry Point Y) Go To Map 0200, Entry Point A. 005 Go to MAP for displayed reference code. 006 1Press power-off key. 2.Connect CE-meter (Range 15VDC) -lead to 01A-B2B3-E01 '-X.XV sense PS1045 01A-B2 A32' (ALD-YC851) +lead to any D08 pin. The -lead of your meter must be connected without removing the connectors. 3. Press power-on switch. -12VDC at least momentarily present? Y N 007 1.Press power-off key. 2. Ensure that connectors on 01A-B2B3-E01 and on 01A-B2W5-E01 are seated correctly. 3.Connect CE-meter (Range 15VDC) -lead to 01A-B2W5-E01 '-X.XV PS1045 to 01A-B2 ACA' (ALD-YC851) +lead to any D08 pin. The -lead of your meter must be connected without removing the connectors. 4. Press power-on switch. -12VDC at least momentarily present?

F G 2770 MAP F7A1-2

008
1.Press power-off key
2.Connect CE-meter (Range 15VDC)
-lead to 01A-C2B5-E01

(ALD-YC871) +lead to any D08 pin 3.Press power-on switch.

'-X.XV PS1045 to 01A-B2 ACA'

-12V DC at least momentarily present? Y N

009

1.Press power-off switch.
2.Check and repair -12V wiring on board
01A-C2
(ALD-YC871)
or replace board 01A-C2.
Go to Page 4, Step 030, Entry Point Z.

010

Check and repair or replace cable for -12V from board 01A-C2B5-E01

'-X.XV PS1045 to 01A-B2 ACA'
(ALD-YC871)
to board 01A-B2W5-E01
(ALD-YC851)
Go to Page 4, Step 030, Entry Point Z.

011

Board wiring of -12V net defective. 1.Press power-off key. 2.Check and repair -12V board wiring or replace board 01A-B2. Go to Page 4, Step 030, Entry Point Z.

> 15MAR79 PN 8488557 EC 366205 PEC 366189 2770 MAP F7A1-2



Ref.C.F7A42001 JKLM 2770 MAP F7A1-3 **Power Problem** PAGE 3 OF 4 012 016 (Entry Point L) 1.Press power-off key. 2.Connect CE-meter (Range 1.5VDC) -lead to 01A-A2D2-U06 1. Press power-off key. '-1.5V sense -12V 01A-B2 A32' 2. Repair or replace cable with paddle (ALD-YB643) card from +lead to any D08 pin. board 01A-B2 to 01A-A2A2. 3. Press power-on switch. Go to Page 4, Step 030, Entry Point Z. -1.5VDC at least momentarily present? 017 Do not disconnect the CE-meter. Y N 1.Remove paddle card from position 01A-A2A2. Is the voltage measured in previous step higher than 2.0VDC. Is the resistance below 200 ohm? Y N Y N 014 1.Pless power-off key. Go to Page 4, Step 030, Entry Point Z. 2.Connect CE-meter (Range 1.5VDC) -lead to paddle card connector exit 019 01A-A2A2-D09 There is a short circuit between the signal '-1.5V sense -12V 01A-B2 A32' '-1.5V sense -12V 01A-B2 A32' (ALD-YB241) (ALD-YB643) +lead to any D08 pin. (ALD-YB241) and DC-ground. Check and repair board 3. Press power-on switch. wiring or replace board 01A-A2. -1.5VDC at least momentarily present? Go to Page 4, Step 030, Entry Point Z. Y N 020 1. Press power-off key. 1.Press Power-off key. 2. Repair sense wiring from 01A-A1D2-U06 '-1.5V sense -12V 01A-B2 A32' 2.Connect CE-meter (Range ohm X1) to any D08 pin and to (ALD-YB643) 01A-A2A2-D09 to 01A-A2A2-D09 '-1.5V sense -12V 01A-B2 A32' '-1.5V sense -12V 01A-B2 A32' (ALD-YB241) (ALD-YB241) 3.Remove PC sense card from or replace board 01A-A2. position 01A-A2D2. Go to Page 4, Step 030, Entry Point Z. Is the resistance below 200 ohm? 021 Y N 1.Press power-off key. 2.Replace paddle card with cable in position 01A-A2A2. Go to Page 4, Step 030, Entry Point Z. 15MAR79 PN 8488557 EC 366205 PEC 366189 HJKLM 2770 MAP F7A1-3

Ref.C.F7A42001

Power Problem

PAGE 4 OF 4

022

- 1.Press power-off key.
- 2.Exchange both PC sense cards in positions 01A-A2D2 and 01A-A2C2.
- 3. Press power-on switch and wait approximately one minute.

Is the power complete indicator on?

Y N

023

(Entry Point H)

Any reference code displayed?

Y N

024

- 1.Press power-off key
- 2.Replace PC sense card which is now plugged in position 01A-C2.

Go to Step 030, Entry Point Z.

025

Reference code F7A42001 displayed?

/ N

026

- 1. Press power-off key.
- 2. Replace PC sense card in position 01A-A2C2.

Go to Step 030, Entry Point Z.

027

Suspect power program error.

Go To Map 0202, Entry Point A.

AN

2770

MAP F7A1-4

028

- 1.Press power-off key.
- 2. Replace PC sense card which is now in position 01A-A2C2.
- 3. Press power-on switch and wait approximately one minute.

Is the power complete indicator on?

Y N

029

Go to Step 023, Entry Point H.

030

(Entry Point Z)

Go To Map 0204, Entry Point A.

031

- 1. Press power-off key.
- 2. Suspect faulty paddle card in position 01A-A2A2.

Replace cable with paddle card.

Go to Step 030, Entry Point Z.

15MAR79

PN 8488557

EC 366205

PEC 366189

2770

MAP F7A1-4

N

REF.CODE F7D42201 FIX 0001

POWER PROBLEM

PAGE 1 OF 5

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	A	ì	001

EXIT POINTS

EXIT TH	IS MAP	ТО	
PAGE	STEP	MAP	ENTRY
NUMBER	NUMBER	NUMBER	POINT
2	005	0200	A
4	021	0202	A
3	015	0204	A
5	035	0242	A

2780

MAP F7A2-1

001

Symptom:

PS104 +5.1V on 01A-C1 out of tolerance, A22

	Suspected errors or FRU's cluding intermittent errors)
3 4 5 6 7	+5.1VDC distribution. A22 sense wiring. PS104.
1 8 1	TR104.

(Entry Point A)

Switch to CE-mode at CE-panel.

Is PS104-CP02 tripped?

YN

002

Press power-on switch and wait approximately one minute.

Is the "power complete" indicator on?

Y !

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5 4 2 A B C REF.CODE F7D42201

26OCT81

PN 4008759

EC 366493

PEC 366387

2780

MAP F7A2-1

REF.CODE F7D42201 2780 MAP F7A2-2 **Power Problem** PAGE 2 OF 5 003 009 Is the reference code F7D42201 displayed? 1.Press power-off key. Y N 2.Connect CE-meter (range 5VDC) +lead to 01A-A2D2-U05 '+1.5V sense +5.1V 01A-C1 A22' is any other reference code displayed? (ALD-YB643) -lead to any D08 pin Y N 3. Observe your meter and press the power-on 005 Go To Map 0200, Entry Point A. Was 1.5VDC at least momentarily present? 006 Y N Go to corresponding MAP. 010 007 1.Press power-off key. (Entry Point C) 2.Connect CE-meter (range 5VDC) +lead to 01A-A2A2-B09 1.Press power-off key. '+1.5V sense +5.1V 01A-C1 A22' 2.Ensure that the following listed connectors (ALD-YB241) and paddlecards are seated correctly: -lead to any D08 pin 01A-A2A2 3. Observe your meter and press the 01A-C1B4 power-on switch. 01A-C1A2 Was 1.5VDC at least momentarily 3.If no error found exchange both PC-sense cards in positions 01A-A2D2 and 01A-A2C2. present? YN 4. Press power-on switch and wait approximately one minute. Is the reference code F7D42201 displayed? 1.Press power-off key. NY 2.Connect CE-meter (range 5VDC) +lead to 01A-C1B4-D03 800 '+5.1V PS104 to 01A-C1 IPS' (ALD-YA529) 1.Press power-off key. -lead to any D08 pin. 2. Replace PC-sense card in position 01A-A2C2. 3. Observe your meter and press the Go to Page 3, Step 015, Entry Point Z. power-on switch. Was 5.1VDC at least momentarily present? NY 260CT81 PN 4008759 EC 366493 PEC 366387 2780 **MAP F7A2-2**

Power Problem PAGE 3 OF 5 015 012 1.Press power-off key. 1.Press power-off key. 2.Replace PS104. 2.Connect CE-meter (range 5VDC) +lead to 01A-C1A2-002 (Entry Point Z) '+5.1V PS104 to 01A-C1 IPS TEST' (ALD-YA525) -lead to 01A-C1A2-003 Go To Map 0204, Entry Point A. 'DC-GND' 3. Observe your meter and press the power-on 016 1.Press power-off key. 2.Replace PS104. Was 5.1VDC at least momentarily present? Go to Step 015, Entry Point Z. 017 013 1.Press power-off key. 1.Press power-off key. 2.Check and repair or replace wiring from PS104 2.Connect CE-meter (range 5VDC) *lead to connector PS104-04-005 (ALD-YA451) '+5.1V PS104 to 01A-C1 IPS TEST' to 01A-C1A2. (ALD-YA451) (ALD-YA525) -lead to connector PS104-04-003 Go to Step 015, Entry Point Z. 'DC-GND' 018 Was 5.1VDC at least momentarily 1.Press power-off key. present? 2.Check and repair wiring from NY 01A-C1A2-002 '+5.1V PS104 to 01A-C1 IPS TEST' 014 (ALD-YA525) 1. Press the power-off key. to 01A-C1B4-D03 2.Connect CE-meter (range 5VDC) (ALD-YB529) +lead to connector PS104-02-001 Go to Step 015, Entry Point Z. '+5.1V PS104 to 53FD SYS' (ALD-YA451) 019 -lead to PS104-02-002 'DC-GND' Check and repair wiring or replace cable and 3. Press power-on switch. paddle card with resistor network in position 01A-C1B4. Was 5.1VDC at least momentarily Go to Step 015, Entry Point Z. present? M 260CT81 PN 4008759 PEC 366387 EC 366493 JKLM MAP F7A2-3 2780

GJKLM

2780

MAP F7A2-3

REF.CODE F7D42201

B E F REF.CODE F7D42201	N P 2780 MAP F7A2-4
Power Problem	
PAGE 4 OF 5	
020	027
1.Press power-off switch.	(Entry Point B)
2.Check and repair wiring from 01A-A2A2-B09	1 Broom power off key
'+1.5V sense +5.1V 01A-C1 A22'	1.Press power-off key. 2.Check input line connection to TR104
(ALD-YB241)	according to customers line voltage. For
to 01A-A2D2-U05	correct connection see (ALD-YA541)
'+1.5V sense +5.1V 01A-C1 A22' (ALD-YB643)	(ALD-YA941) (ALD-YA021)
Go to Page 3, Step 015, Entry Point Z.	3.Check connector PS104-09 and wiring
021	between TR104 and PS104. If no error detected, replace TR104.
Suspect operation control program problem.	Go to Page 1, Step 001, Entry Point A.
Use diagnostic diskette and retry power on.	
If the problem is not solved,	028
Go To Map 0202, Entry Point A.	Connect CE-meter (range 15VAC) to connector PS104-08-001
022	'5.4VAC'
Run the voltage measurement program.	(ALD-YA451)
Is address 97 bit 3 (+5.1V PS104, 01A-C1,	and to connector PS104-08-012 'Center'
A22) out of tolerance?	Center
YN	Is 5.4VAC present?
022	Y N
023 Is any other voltage out of tolerance?	029
YN	Go to Step 027, Entry Point B.
024	030
Go to Page 3, Step 015, Entry Point Z.	Connect CE-meter (range 15VDC) +lead to connector PS104-02-001
025	'+5.1V PS104 to 53FD SYS'
Go to Page 3, Step 015, Entry Point Z.	(ALD-YA451)
1 026	-lead to PS104-02-002 'DC-GND'
Connect CE-meter (range 15VAC)	DC-GND
to connector PS104-08-010	Is 5.1VDC present?
'5.4VAC'	YN
and to connector PS104-08-012 'Center'	031
(ALD-YA451)	1.Press power-off key.
	2.Replace PS104.
Is 5.4VAC present? Y N	Go to Page 1, Step 001, Entry Point A.
İÏ	032
	Go to Page 2, Step 007, Entry Point C.
	2000T01 DN 4000TE0
	26OCT81 PN 4008759
1.1	EC 366493 PEC 366387
N P	2780 MAP F7A2-4

Power Problem

PAGE 5 OF 5

033

1.Switch PS104-CP02 on.

2.Press power-on switch.

Is PS104-CP02 tripped?

ΥN

034

Go to Page 1, Step 001, Entry Point A.

035

Go To Map 0242, Entry Point A.

260CT81

PN 4008759

EC 366493

PEC 366387

2780

MAP F7A2-5

REF.CODE F7D42401 FIX 0000

POWER PROBLEM

PAGE 1 OF 5

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX 0200	A	1 3	001 009

EXIT POINTS

EXIT TH	IS MAP	то	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
2	003	0200	A
2	008	0202	Α
5	023	0204	Α

2790

MAP F7A3-1

001

Symptom:

TR104 thermal failure, D03.

Suspected errors or FRU's (including intermittent errors)
1 PC sense card 01A-A2D2. 2 24V wiring from PS104 to TR104. 3 BPC card 01A-A2B2. 4 D03 sense wiring.
5 TR104.

(Entry Point A)

1.Press power-off key.

2.Exchange booth PC sense cards in positions

01A-A2C2 and 01A-A2D2.

3. Press power-on switch and wait approximately one minute.

Is the reference code F7D42401 displayed?

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18JUL80 PN 4008760 EC 366387 PEC 366356 2790 MAP F7A3-1

2 A

4331

```
REF.CODE F7D42401
               Power Problem
               PAGE 2 OF 5
  002
  1.Press power-off key.
  2.Observe the "base power on" indicator and
  press the power-on switch.
  Is the "base power on" indicator switched
  on?
  YN
     1.Press power-off key.
     Go To Map 0200, Entry Point A.
  004
  1.Press power-off key.
  2.Replace PC sense card which is now in
  position 01A-A2C2.
  3.Press power-on switch and weit
  approximatley one minute.
  Is any reference code displayed?
  Y N
     Go to Pago 5, Step 023, Entry Point Z.
  003
  Go to corresponding MAP
007
1.Probe 01A-A2D2-M05
'-TR104 TH feiled D03'
(ALD-YB643).
```

is the down indicator of the probe on?

Suspect bent pin 01A-A2D2-M05

Go To Map 0202, Entry Point A.

1.Press power-off key.

If no error detected,

2790

MAP F7A3-2

18JUL80 PN 4008760 EC 366387 PEC 366356 2790 MAP F7A3-2

3

A M

008

Go to Pago 5, Step 023, Entry Point Z.

18JUL80 PN 4008760 EC 366387 PEC 366356 2790 MAP F7A3-3

2790

MAP F7A3-3

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EC 366387 PEC 366356 2790 MAP F7A3-4

PN 4008760

18JUL80

REF.CODE F7D42401

Power Problem

PAGE 5 OF 5

018

1.Disconnect paddle card from position 01A-A2YA.

2. Remove PC sense Card 01A-A2D2.

3.Use ohmmeter (range ohm x1) and check resistance between the following points:

a) 01A-A2B2-D08

and 01A-A2B2-P10

Resistance must be approximately 1150 ohm.

b) 01A-A2B2-P10

and 01A-A2B2-G13

Resistance must be approximately 900 ohm.

Are both resistances ok.?

019

1.Remove BPC card from 01A-A2B2. 2.Use ohm meter (range ohm X1) and connect the leads to any D08 pin 'DC-Gnd' and to 01A-A2D2-M05 '-TR104 TH failed D03' (ALD-YB643).

Is the resistance higher than 100k ohm?

020

Suspect short circuit to ground. Repair wiring of signal '-TR104 TH failed (ALD-YB643)

Go to Step 023, Entry Point Z.

1.Replace BPC card which was previously removed from 01A-A2B2.

2.Reinstall all previously removed cards and

Go to Step 023, Entry Point Z.

2790

MAP F7A3-5

022

The Wiring is ok.

(Entry Point C)

The TR104 thermal switch may have closd again.

Reconnect all connectors and retry power

If the same failure occurs again, replace transformer TR104.

If any other failure occurs go to MAP according to displayed reference code.

023

Thermal switch of TR104 is open.

- 1.Switch off PCC-CB01.
- 2. Replace TR104.

(Entry Point 2)

Go To Map 0204, Entry Point A.

18JUL80

PN 4008760

EC 366387

PEC 366356

2790

MAP F7A3-5

PAGE 1 OF 9

ENTRY POINTS

EXIT POINTS

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER
F7XX	A	1 2	001
F79A	AA		006

EXIT TH	IS MAP	ТО	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
5 9 5 9	032 057 038 058	0200 0202 0204 0250	A A A

001

Symptom:

PS104 +8.5V on 01A-B2 and 01A-C2 out of tolerance, A23 and A31.

Suspected errors or FRU's (including intermittent errors)	-
1 PC sense card 01A-A2D2. 2 +8.5VDC distribution. 3 Load fault. 4 A31 and A23 sense wiring. 5 PS104. 6 TR104. 7 Line voltage distribution.	

(Entry Point A)

- 1.Press power-off key.
- 2.Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

Y N

O02
Is reference code F7D42601 displayed?
Y N

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REF.CODE F7D42601

ACA2800

15SEP82 PN 4008761 EC 366589 PEC 366493 2800 MAP F7A4-1

REF.CODE F7D42601 E F 2800 MAP F7A4-2 POWER PROBLEM PAGE 2 OF 9 800 Is any other reference code displayed? 1.Press power-off key. Y N 2. Ensure that connectors on 01A-C2W3-A14 and 01A-C2W2-A14 and 004 on 01A-C2W4-A14 are seated correctly. Go to Page 5, Step 032, Entry Point Y. 3.Connect CE-meter (range 15VDC) +lead to 01A-C2W3-A14 or 01A-C2W4-A14 Go to MAP for displayed reference code. '+8.5V PS1045 to 01A-C2 K/W CA' (ALD-YC871) 006 -lead to any D08 pin. (Entry Point AA) The +lead of your meter must be connected without removing the connectors. 1. Press power-off key. 4. Press power-on switch. 2.Connect CE-meter (range 15VDC) +lead to 01A-C2W2-A14 Is +8.5VDC at least momentarily present? '+8.5V sense PS1045 01A-C2 A31' Y N (ALD-YC871) -lead to any D08 pin. 009 The +lead of your meter must be connected Go to Page 7, Step 045, Entry Point G. without removing the connectors. 3. Press Power-on switch. 010 1.Press power-off key. Was +8.5VDC +/- 1.0V present as long as the 2. Board wiring of +8.5V net is defective. power-on switch was pressed? Replace board 01A-C2. Y N Go to Page 5, Step 038, Entry Point Z. 007 011 There is a load fault on board 01A-B2 Col.S or Do not disconnect your meter. 1.Disconnect voltage connector block from sense wiring problem of analog sense line A23. 01A-C2B5-E01 (-12V) Do not disconnect your meter. 01A-C2B5-A01 (DC-GND) 1.Press power-off switch. 2. Reconnect the connectors which were 01A-C2B4-A14 (+8.5V) 01A-C2B4-E14 (DC-GND) disconnected in the previous step. '+8.5V PS1045 to 01A-B2 AC ADAPT' 3. Disconnect the sense line connector block (ALD-YC871) from 2. Press power-on switch. 01A-B2B3-E01 (-12V) 01A-B2B3-A01 (+8.5V) Was +8.5VDC +/- 1.0V present as long as 01A-B2B2-E14 (+10.1V) the power-on switch was pressed? 01A-B2B2-A14 (+5.1V) (ALD-YC851) 4. Press power-on switch. (Step 011 continues) PN 4008761 15SEP82 EC 366589 PEC 366493 DEF

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REF.CODE F7D42601 POWER PROBLEM

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(Step 011 continued)

Was +8.5VDC +/- 1.0V present as long as the power-on switch was pressed?

Y N

012

Suspect a load fault on 01A-B2.
Replace ACA (Auto Call Adapter) card(s) in positions 01A-B2S2 and/or 01A-B2S4.
If the problem is not solved by previous card replacement replace board 01A-B2.

Go to Page 5, Step 038, Entry Point Z.

013

There is a sense wiring problem of sense line A23.

- 1. Press power-off key.
- 2.Connect CE-meter (range 15VDC)
- -lead to 01A-B2B3-A01
- '+8.5V sense PS1045 01A-B2 A23' (ALD-YC851)
- +lead to any D08 pin.

The -lead of your meter must be connected without removing the connectors.

3. Press power-on switch.

Was +8.5VDC +/- 1.0V present as long as the power-on switch was pressed?

Y N

014

Sense wiring error on board 01A-B2. Replace board 01A-B2.

Go to Page 5, Step 038, Entry Point Z.

015

G

1.Press Power-off key.

2.Connect CE-meter (range ohm X1)

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MAP F7A4-3

to any D08 pin and to

01A-A2A2-B08

'-1.5V sense +8.5V 01A-B2 A23'

(ALD-YB241)

3. Remove PC sense card from position

01A-A2D2.

Is the resistance below 200 ohm?

ΥN

016

1.Press power-off key.

2.Repair or replace cable with paddle card

from board 01A-B2 to 01A-A2A2.

Go to Page 5, Step 038, Entry Point Z.

017

Do not disconnect the CE-meter.

Remove paddle card from position 01A-A2A2.

Is the resistance below 200 ohm?

Y N

018

Go to Page 5, Step 038, Entry Point Z.

019

There is a short circuit between the signal

'-1.5V sense +8.5V 01A-B2 A23'

(ALD-YB643)

(ALD-YB241)

and DC-GND.

Check and repair board wiring or replace board

01A-A2.

Go to Page 5, Step 038, Entry Point Z.

15SEP82

PN 4008761

EC 366589

PEC 366493

2800

MAP F7A4-3

G

POWER PROBLEM PAGE 4 OF 9 020 1.Press power-off key. 2.Connect CE-meter (range 1.5VDC) +lead to 01A-A2D2-U02 +1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) -lead to ony D08 pin. 3.Carefully observe your meter and press power-on switch. Was +1.5VDC +/- 10% present as long as the power-on switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1.Press power-off key. 2.Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) -lead to amy D08 pin. 3.Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1.Press power-on switch was pressed? Y N 024 (Entry Point L) 1.Press power-off key. 2.Repair or replace cable with paddle card from board 01A-A2A3. Go to Page 5, Step 038, Entry Point Z. 025 Do not disconnect the CE-meter. Remove paddle card from position 01A-A2A3. Is the resistance below 200 ohm? Y N 026 Go to Page 5, Step 038, Entry Point Z. 027 There is a short circuit between the signal '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) In Diana diana	D REF.CODE F7D42601	J K L M 2800 MAP F7A4-4
PAGE 4 OF 9 020 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +1-5V sense +8.5V 01A-C2 A31' (ALD-Y8643) -1-ead to any D08 pin. 3. Carefully observe your meter and press power-on switch. Was +1.5VDC +/- 10% present as long as the power-on switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +1-ead to a pddle card connector exit 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) -1-lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch Was +1.5VDC +/- 1.0V present as long as the power-on switch Was +1.5VDC +/- 1.0V present as long as the power-on switch Was +1.5VBC +/- 1.0V present as long as the resistance below 200 ohm? Y N Press power-off key. 2.Replair or replace board 01A-A2. Go to Page 5,		1 1
020 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to 01A-A2D2-U02 +1. EV sense +8.5V 01A-C2 A31' (ALD-Y8643) -lead to any D08 pin. 3. Carefully ensement or switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) -lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 024 (Entry Point L) 1. Press power-off key. 2. Repair or replace cable with paddle card from position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z. 025 Do not disconnect the CE-meter. Remove paddle card from position 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) -lead to any D08 pin. 3. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) -lead to any D08 pin. 3. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to paddle card from position 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) 01A-A2A3-B13 -1.5V sense +8.5V 01A-C2 A31' (ALD-Y82		
1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to 0.10 A-A2D2-U02 '+1.5V sense +8.5V 0.1A-C2 A31' (ALD-YB843) -lead to any D08 pin. 3. Carefully observe your meter and press power-on switch. Was +1.5VDC +/- 10% present as long as the power-on switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit 0.1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) -lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch. V N 023 1. Press power-off key. 2. Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3. Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 023 1. Press power-off key. 2. Repair or replace cable with paddle card from board 01A-A2A3. Go to Page 5, Step 038, Entry Point Z. 025 026 Go to Page 5, Step 038, Entry Point Z. 027 There is a short circuit between the signal '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 028 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.	PAGE 4 OF 9	
1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to 0.10 A-A2D2-U02 '+1.5V sense +8.5V 0.1A-C2 A31' (ALD-YB843) -lead to any D08 pin. 3. Carefully observe your meter and press power-on switch. Was +1.5VDC +/- 10% present as long as the power-on switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit 0.1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) -lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch. V N 023 1. Press power-off key. 2. Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3. Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 023 1. Press power-off key. 2. Repair or replace cable with paddle card from board 01A-A2A3. Go to Page 5, Step 038, Entry Point Z. 025 026 Go to Page 5, Step 038, Entry Point Z. 027 There is a short circuit between the signal '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 028 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.		
2.Connect CE-meter (range 1.5VDC) +lead to 01A-A2D2-U02 +1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) -lead to any D08 pin. 3.Carefully observe your meter and press power-on switch. Was +1.5VDC +/- 10% present as long as the power-on switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1.Press power-off key. 2.Connect CE-meter (range 1.5VDC) +lead to any D08 pin. 3.Press power-off key. 1.Press power-off key. 2.Connect CE-meter (range 1.5VDC) +lead to paddle card from position 01A-A2A3. (ALD-Y8241) -lead to any D08 pin. 3.Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1.Press Power-off key. 2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) 3.Remove PC sense card from position 01A-A2D3. Is the resistance below 200 ohm? Y N 023 1.Press power-off key. 2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 027 There is a short circuit between the signal '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 028 1.Press power-off key. 2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1.Press power-off key. 2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) to 01	" -	
+lead to 01A-A2D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) -lead to any D08 pin. 3.Carefully observe your meter and press power-on switch. Was +1.5VDC +/- 10% present as long as the power-on switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1.Press power-off key. 2.Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) -lead to any D08 pin. 3.Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1.Press power-on switch was pressed? Y N 024 2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense eard from position 01A-A2D2. Is the resistance below 200 ohm? Y N 025 1.Press power-off key. 2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense eard from position 01A-A2D2. Is the resistance below 200 ohm? Y N 026 Go to Page 5, Step 038, Entry Point Z. 027 There is a short circuit between the signal '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 028 1.Press power-off key. 2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 025 Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z.	•	(Entry Point L)
**1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) -lead to any D08 pin. 3. Carefully observe your meter and press power-on switch. Was +1.5VDC +/- 10% present as long as the power-on switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1.Press power-off key. 2.Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) -lead to any D08 pin. 3.Press power-on switch was pressed? Y N 023 1.Press power-on switch was pressed? Y N 024 2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8241) 3.Remove PC sense card from position 01A-A2A. Is the resistance below 200 ohm? Y N 025 Go to Page 5, Step 038, Entry Point Z. 027 There is a short circuit between the signal '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) (ALD-Y8643) (ALD-Y8643) 10 O1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) 10 O1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) 10 O1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8641) 10 O1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) 10 O1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) 10 O1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) 10 O1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) 10 O1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) 10 O1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) 10 O1A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-Y8643) 10 O1A-A2A3-B13 '-1.5V sense		
card from board 01A-C2 to 01A-A2A3. -lead to any D08 pin. 3.Carefully observe your meter and press power-on switch. Was +1.5VDC +/- 10% present as long as the power-on switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1.Press power-off key. 2.Connect CE-meter (range 1.5VDC) +lead to any D08 pin. 3.Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1.Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1.Press Power-off key. 2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 1028 1.Press power-off key. 2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 1029 1.Press power-off key. 2.Repaire apaddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z. 026 Go to Page 5, Step 038, Entry Point Z. 027 There is a short circuit between the signal '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 028 1.Press power-off key. 2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1.Press power-off key. 2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1.Press power-off key. 2.Repaire apaddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.		
-lead to any D08 pin. 3. Carefully observe your meter and press power-on switch. Was +1.5VDC +/- 10% present as long as the power-on switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) -lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1. Press power-off key. 2. Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 +1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3. Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 028 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 +1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 027 There is a short circuit between the signal +1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 028 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 +1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 +1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 +1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.		4 (L
3. Carefully observe your meter and press power-on switch. Was +1.5VDC +/- 10% present as long as the power-on switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit (ALD-YB241) -lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1. Press Power-off key. 2. Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 (ALD-YB643) (DALD-YB241) -1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) (DALD-YB241) -1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) (DALD-YB241) -1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) (DALD-YB241) -1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) (DALD-YB241) -1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) -1.5V sense +8.5V 01A-C2 A31' (ALD	•	
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Was +1.5VDC +/- 10% present as long as the power-on switch was pressed? Y N 021 Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit 01A-A2A3-B13 (*1.5V sense *8.5V 01A-C2 A31' (ALD-YB241) -lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1. Press Power-off key. 2. Connect CE-meter (range 0.5VDC) +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1. Press Power-off key. 2. Connect CE-meter. Remove paddle card from position 01A-A2A3-B13 (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 026 Go to Page 5, Step 038, Entry Point Z. 027 There is a short circuit between the signal '+1.5V sense *8.5V 01A-C2 A31' (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense *8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense *8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.		
Remove paddle card from position 01A-A2A3. Remove paddle card from position 01A-A2A3. Is the resistance below 200 ohm? N O22 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N O23 1. Press Power-off key. 2. Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) (ALD-YB643) (ALD-YB241) 3. Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N O26 Go to Page 5, Step 038, Entry Point Z. O27 There is a short circuit between the signal '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) (ALD-YB643) (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. O28 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 0		025
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Use the voltage measured in previous step higher than 2.0VDC. Y N O22 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit O1A-A2A3-B13 '+1.5V sense +8.5V O1A-C2 A31' (ALD-YB241) -lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N O23 1. Press Power-off key. 2. Connect CE-meter (range ohm X1) to any D08 pin and to O1A-A2A3-B13 '+1.5V sense +8.5V O1A-C2 A31' (ALD-YB241) 3. Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N O26 Go to Page 5, Step 038, Entry Point Z. O27 There is a short circuit between the signal '+1.5V sense +8.5V O1A-C2 A31' (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. O28 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V O1A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V O1A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V O1A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V O1A-C2 A31' (ALD-YB241) O1A-A2A3-B13 '+1.5V sense +8.5V O1A-	•	i i ·
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Was the voltage measured in previous step higher than 2.0VDC. Y N 022 1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) + lead to paddle card connector exit 01A-A2A3-B13	021	Is the resistance below 200 ohm?
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D26 Go to Page 5, Step 038, Entry Point Z.		
1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) + lead to paddle card connector exit 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) - lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1. Press Power-off key. 2. Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3. Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 029 1. Press power-off key. 2. Repair sense wiring from 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Repair sense wiring from 01A-A2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.		026
1. Press power-off key. 2. Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) -lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1. Press Power-off key. 2. Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 028 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) (ALD-YB643) (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 028 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 029 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.	11	Go to Page 5, Step 038, Entry Point Z.
2.Connect CE-meter (range 1.5VDC) +lead to paddle card connector exit 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643)	1 1	
+lead to paddle card connector exit 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) -lead to any D08 pin. 3.Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1.Press Power-off key. 2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB641) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 029 1.Press power-off key. 2.Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z. 15SEP82 PN 4008761 EC 366589 PEC 366493	4 4	1 1
01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) -lead to any D08 pin. 3.Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1.Press Power-off key. 2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB441) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N (ALD-YB643) (ALD-YB643) 10 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) 10 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 0 or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. Go to Page 5, Step 038, Entry Point Z. 1.Press power-off key. 2.Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.	7 1	• •
'+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) -lead to any D08 pin. 3.Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 023 1.Press Power-off key. 2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N (ALD-YB241) 1.Press power-off key. 2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB41) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 1.Press power-off key. 2.Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.		1 1
(ALD-YB241) -lead to any D08 pin. 3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N O23 1. Press Power-off key. 2. Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3. Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. O28 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. O29 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.		
3. Press power-on switch. Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N O23 1. Press Power-off key. 2. Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3. Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N O28 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z. O28 1. Press power-off key. 2. Replace board 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. O29 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.		
Was +1.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N O23 1.Press Power-off key. 2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N O28 1.Press power-off key. 2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. O29 1.Press power-off key. 2.Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.	-lead to any D08 pin.	wiring or replace board 01A-A2.
as the power-on switch was pressed? Y N O23 1. Press Power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 0. Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.	3.Press power-on switch.	Go to Page 5, Step 038, Entry Point Z.
as the power-on switch was pressed? Y N O23 1. Press Power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 0. Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 1. Press power-off key. 2. Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.	Was 115VDC 1/- 10V present as long	028
2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB643) to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 2.Repair sense wiring from 01A-A1D2-U02 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 1.Press power-off key. 2.Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.		1
1. Press Power-off key. 2. Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 ('+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3. Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N (ALD-YB643) to 01A-A2A3-B13 ('+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.		• • • • • • • • • • • • • • • • • • •
1.Press Power-off key. 2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 1.Press Power-off key. 2.Connect CE-meter (range ohm X1) to any D08 pin and to (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 038, Entry Point Z. 1.Press power-off key. 2.Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z.		1 ,
2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 15SEP82 PN 4008761 EC 366589 PEC 366493	023	(ALD-YB643)
any D08 pin and to 01A-A2A3-B13 '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N Calculate the position of t		1
or replace board 01A-A2. '+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N O29 1.Press power-off key. 2.Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z. 15SEP82 PN 4008761 EC 366589 PEC 366493	1 1 1	- 1
'+1.5V sense +8.5V 01A-C2 A31' (ALD-YB241) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N O29 1.Press power-off key. 2.Replace paddle card with cable in position 01A-A2A3. Go to Page 5, Step 038, Entry Point Z. 15SEP82 PN 4008761 EC 366589 PEC 366493		
(ALD-YB241) 3.Remove PC sense card from position 01A-A2D2. Is the resistance below 200 ohm? Y N 15SEP82 PN 4008761 EC 366589 PEC 366493	1 1 1	i '
3.Remove PC sense card from position 01A-A2D2. 1.Press power-off key. 2.Replace paddle card with cable in position 01A-A2A3. Y N 15SEP82 PN 4008761 EC 366589 PEC 366493	1 1 1	do to rage o, otop ood, Entry rount E.
2. Replace paddle card with cable in position 01A-A2A3. Y N Go to Page 5, Step 038, Entry Point Z. 15SEP82 PN 4008761 EC 366589 PEC 366493		029
Is the resistance below 200 ohm? 01A-A2A3. Y N Go to Page 5, Step 038, Entry Point Z. 15SEP82 PN 4008761 EC 366589 PEC 366493	position 01A-A2D2.	1. Press power-off key.
Go to Page 5, Step 038, Entry Point Z. 15SEP82 PN 4008761 EC 366589 PEC 366493		· · · · ·
15SEP82 PN 4008761 EC 366589 PEC 366493		
EC 366589 PEC 366493		Go to Page 5, Step U38, Entry Point Z.
EC 366589 PEC 366493		
EC 366589 PEC 366493		1555D00 DN 4000761
ς ' · · · · ·		100EF02 FIN 4000/01
Ĥ J K L M 2800 МАР F7A4-4	_	EC 366589 PEC 366493
	Á J K L M	2800 MAP F7A4-4

REF.CODE F7D42601 POWER PROBLEM

PAGE 5 OF 9

030

- 1.Press power-off key.
- 2.Exchange both PC sense cards in positions 01A-A2D2 and 01A-A2C2.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

ΥN

031

(Entry Point H)

Is any reference code displayed?

Y N

032

(Entry Point Y)

Go To Map 0200, Entry Point A.

033

Is reference code F7D42601 displayed?

Y N

034

- 1.Press power-off key.
- 2.Replace PC sense card in position 01A-A2C2.

Go to Step 038, Entry Point Z.

035

Suspect power program error. Retry power on with the diagnostic diskette. If the problem is not solved,

Go to Page 9, Step 057, Entry Point X.

2800

MAP F7A4-5

036

Ν

- 1.Press power-off key.
- 2.Replace PC sense card which is now in position 01A-A2C2.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

N

037

Go to Step 031, Entry Point H.

038

(Entry Point Z)

Go To Map 0204, Entry Point A.

15SEP82

PN 4008761

EC 366589

PEC 366493

2800



PAGE 6 OF 9

039 (Entry Point E)

1. Run voltage measurement program. 2. Check the following voltages for out of tolerance. Addr | Bits | Voltages sense | Corresponding | from board line 85 | 4 | +8.5V PS104 | 01A-C2 MSSS | A46 97 | 5 | -5.1V PS104 | 01A-C2 A33 A64 95 | 5 | -12V PS104 | 01A-C2 97 | 0 | -12V PS104 | 01A-A2 1 A43 85 | 3 | +5.1V PS104 | 01A-C2 or B1* | A44 97 | 1 | -5.1V PS104 | 01A-C2 MSSS | A45 | A31 97 | 7 | +8.5V PS104 | 01A-C2 F79A 85 | 7 | +8.5V PS104 | 01A-B2 A23 | +5.1V PS104 | 01A-C2 | A30 85 | 2 | +12V PS104 | 01A-A2 MSSS | A42 F797 95 | 0 | -12V P104 | 01A-B2 A32 97 | 3 | +5.1V PS104 | 01A-C1 95 | 1 | -5.1V PS104 | 01A-B1 | A63 F7A6 97 | 6 | -5.1V PS104 | 01A-A1 A01 F7AA A5 | 1 | +12V PS104 | 01A-B1 | A13 A5 | 0 | +12V PS104 | 01A-A1

(Step 039 continues)

15SEP82 PN 4008761

EC 366589 PEC 366493



^{*} For 4321/4331-1 is the sense point A44 on 01A-C2. For 4331-2/4331-11 is the sense point A44 on 01A-B1.

REF.CODE F7D42601 POWER PROBLEM

ST

2800

MAP F7A4-7

PAGE 7 OF 9 (Step 039 continued) Are voltages below maximum limit? 040 Is more than one voltage out of tolerance? 041 (Entry Point K) Is +8.5VDC from PS104 on 01A-C2 out of tolerance (Address 97, bit 7)? 042 Go to MAP according to table after ENTRY POINT E, of this MAP Go to Page 6, Step 039, Entry Point E. 043 Connect CE-meter (range 15VDC) +lead to 01A-C2W2-A14 '+8.5V sense PS1045 01A-C2 A31' (ALD-YC871) -lead to any D08 pin 'DC-GND' Is +8.5VDC +/-1.0V present? ΥN 044 Connect CE-meter (range 15VDC) +lead to 01A-C2W3-A14 or 01A-C2W4-A14 '+8.5V PS1045 to 01A-C2 K/W CA' -lead to any D08 pin 'DC-GND' (ALD-YC871) Is +8.5VDC +/-1.0V present?

045 (Entry Point G) 1. Press power-off key. 2.Connect CE-meter (range 15VDC) +lead to 01A-A2W4-A14 '+8.5V PS1045 to 01A-C2 K/W CA' -lead to any D08 pin 'DC-GND' (ALD-YA831). 3. Press power-on switch. Was +8.5VDC +/- 1.0V present as long as the power-on switch was pressed? Y N 046 1. Press power-off key 2.Check and repair board wiring for +8.5V PS104 on board 01A-A2. (ALD-YC831) or replace board C1A-A2 Go to Page 5, Step 038, Entry Point Z. 047 1. Press power-off key. 2. Check and repair or replace cable from 01A-A2W4 and 01A-A2W5 to 01A-C2W3 and 01A-C2W4. (ALD-YC871) (ALD-YC831) Go to Page 5, Step 038, Entry Point Z. 048 1. Press power-off key. 2.Remove all cards from board 01A-C2 column K through W and from board 01A-B2 column if auto call adapters are installed. 3. Connect CE-meter (range 15VDC) +lead to 01A-C2W2-A14 '+8.5V sense PS1045 01A-C2 A31' (ALD-YC871) -lead to any D08 pin. 4. Press power-on switch. (Step 048 continues) 15SEP82 PN 4008761 EC 366589 PEC 366493

2800

REF.CODE F7D42601 UV 2800 MAP F7A4-8 POWER PROBLEM PAGE 8 OF 9 (Step 048 continued) Is +8.5VDC +/- 1.0V present? Y N Check +1.5VDC at connector exit: 1.Connect CE-meter (range 1.5VDC) 049 +lead to 01A-A2A3-B13. 1.Press power-off key. '+1.5V sense +8.5V 01A-C2 A31' 2. Suspect sense wiring error on board -lead to any D08 pin 01A-C2. 'DC-GND' Repair board wiring or replace board (ALD-YB241). 01A-C2. 2. Press power-on switch. 3. Press power-on switch and wait approximately one minute. Is +1.5VDC +/-10% present? Go to Page 6, Step 039, Entry Point E. Y N 050 053 Suspect overload condition caused by a 1.Press power-off key. faulty card. 2. Repair or replace cable with paddle card 1.Press power-off key. from board 01A-C2 2. Replug cards step by step. After each step to 01A-A2A3. press power-on switch and observe your Go to Page 5, Step 038, Entry Point Z. meter reading. Replace the defective card which caused incorrect meter reading at sense point. 1. Press power-off key. 2. Repair wiring or replace board 01A-A2. 3. Press power-on switch. Go to Page 6, Step 039, Entry Point E. Go to Page 5, Step 038, Entry Point Z. 051 055 (Entry Point F) 1. Press power-off key. 2. Exchange both PC sense cards in positions 01A-A2D2 and 01A-A2C2. 1. Check the accuracy of your CE-meter according to hints for power MAP usage in 3. Press power-on switch and wait book MI power, Vol.16. approximately one minute. 2.Check +1.5V voltage at sense card 1 entry: 4. Run voltage measurement program. Connect CE-meter (range 5VDC) +lead to 01A-A2D2-U02 Is address 97 bit 7 out of tolerance (+8.5V PS104, 01A-C2, A31) '+1.5V sense +8.5V 01A-C2 A31' -lead to any D08 pin. Y N 'DC-GND' (ALD-YB643). 1.Press power-off key. Is +1.5VDC +/-10% present? 2. Replace PC sense card which is now in position 01A-A2C2. Go to Page 5, Step 038, Entry Point Z. 15SEP82 PN 4008761 EC 366589 PEC 366493 UV 2800 MAP F7A4-8

PAGE 9 OF 9

057

(Entry Point X)

Go To Map 0202, Entry Point A.

058

Go To Map 0250, Entry Point A.

059

Are all voltages below call CE-limit?

ΥN

060

Go to MAP for failing voltage according to table after ENTRY POINT E of this MAP. Go to Page 6, Step 039, Entry Point E.

061

- 1.Press power-off key.
- 2.Switch CE mode off.
- 3. Press power-on switch and wait approximately one minute.

Is any reference code displayed?

ΥN

062

Suspect intermittent error.

Go to Page 5, Step 038, Entry Point Z.

063

Go to corresponding MAP.

15SEP82

PN 4008761

EC 366589

PEC 366493

2800

PAGE 1 OF 9

ENTRY POINTS

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER
F7XX	A	1	001
F79C	AA	2	006

EXIT POINTS

EXIT TH	IS MAP	ТО			
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT		
5 8	032 057	0200 0202	A A		
2	010	0204	A		
9	058	0250	Α		
9	062	0275	Α		

001

Symptom:

PS104 -12V on 01A-B2 and 01A-C2 out of tolerance, A32 and A64.

Suspected errors or FRU's (including intermittent errors)	- -
1 PC sense card 01A-A2D2. 2 -12VDC distribution. 3 Load fault. 4 A64 and A32 sense wiring. 5 PS104. 6 TR104. 7 Line voltage distribution.	

(Entry Point A)

- 1. Press power-off key.
- 2. Switch to CE-mode at the CE-panel.
- 3. Press power-on switch and wait approximately one minute.

Is the *pow Y N	ver complete* indicator on?
002 Is refere Y N	nce code FDA42801 displayed?
	© Copyright IBM Corp. 1982
622	REF.CODE F7D42801
ABC	ACA2810

15SEP82	PN 4008762
EC 366589	PEC 366493
2810	MAP F7A5-1

E F REF.CODE F7D42801 2810 MAP F7A5-2 **POWER PROBLEM** PAGE 2 OF 9 800 Is any other reference code displayed? 1. Press power-off key. Y N 2. Ensure that connectors 01A-C2W3-A01 01A-C2W5-E01 are seated correctly. 004 3.Connect CE-meter (range 15VDC) Go to Page 5, Step 032, Entry Point Y. -lead to 01A-C2W5-E01 '-X.XV PS1045 to 01A-C2 K/W CA' Go to MAP for displayed reference code. (ALD-YC871) +lead to any D08 pin. 006 The -lead of your meter must be connected (Entry Point AA) without removing the connectors. 4. Press power-on switch. 1.Press power-off key. Is -12VDC +/-1.0V present as long as the 2.Connect CE-meter (range 15VDC) -lead to 01A-C2W3-A01 power on switch is pressed? '-X.XV sense PS1045 A-C2 A64/62' Y N (ALD-YC871) +lead to any D08 pin. Go to Page 7, Step 045, Entry Point G. The -lead of your meter must be connected without removing the connectors. 3.Press Power-on switch. 010 1.Press power-off key. Was -12VDC +/-1.0V present as long as the 2. Board wiring of -12V net defective. power on switch was pressed? Replace board 01A-C2. Y N (Entry Point Z) 007 Go To Map 0204, Entry Point A. 1.Do not disconnect your meter. Disconnect voltage connector block from 01A-C2B5-E01 (-12V) 011 01A-C2B5-A01 (DC-GND) There is a load fault on board 01A-B2 Col.S or 01A-C2B4-A14 (+8.5V) sense wiring problem of analog sense line A32. 01A-C2B4-E14 (DC-GND) Do not disconnect your meter. '-X.XV PS1045 to 01A-B2 ACA' 1.Press power-off switch. (ALD-YC871) 2. Reconnect the connectors which were 2. Press power-on switch. disconnected in the previous step. 3. Disconnect the sense line connector block Was -12VDC +/- 1.0V present as long as from the power-on switch was pressed? 01A-B2B3-E01 (-12V) 01A-B2B3-A01 (+8.5V) 01A-B2B2-E14 (+10.1V). 01A-B2B2-A14 (+5.1V) (ALD-YC851) 4. Press power-on switch. (Step 011 continues) 15SEP82 PN 4008762 EC 366589 PEC 366493 D 2810 MAP F7A5-2

REF.CODE F7D42801

POWER PROBLEM

PAGE 3 OF 9

(Step 011 continued)

Was -12VDC +/- 1.0V present as long as the power-on switch was pressed?

N

012

Suspect a load fault on 01A-B2.
Replace ACA (Auto Call Adapter) card in positions 01A-B2S2 and/or 01A-B2S4.
If the problem is not solved by previous card replacement replace board 01A-B2.

Go to Page 2, Step 010, Entry Point Z.

013

There is a sense wiring problem of sense line A32.

- 1.Press power-off key.
- 2.Connect CE-meter (range 15VDC)
- -lead to 01A-B2B3-E01
- '-X.XV sense PS1045 01A-B2 A32' (ALD-YC851)
- +lead to any D08 pin.

The -lead of your meter must be connected without removing the connectors.

3. Press power-on switch.

Was -12VDC +/- 1.0V present as long as the power-on switch was pressed?

/ N

014

Sense wiring error on board 01A-B2. Replace board 01A-B2.

Go to Page 2, Step 010, Entry Point Z.

G .

MAP F7A5-3

015

- 1.Press Power-off key.
- 2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A2-D09

2810

- '-1.5V sense -12V 01A-B2 A32' (ALD-YB241)
- 3.Remove PC sense card from position 01A-A2D2.

Is the resistance below 200 ohm?

Y N

016

- 1. Press power-off key.
- 2.Repair or replace cable with paddle card from board 01A-B2 to 01A-A2A2.

Go to Page 2, Step 010, Entry Point Z.

017

Do not disconnect the CE-meter. Remove paddle card from position 01A-A2A2.

Is the resistance below 200 ohm?

ΥN

018

Go to Page 2, Step 010, Entry Point Z.

019

There is a short circuit between the signal '-1.5V sense -12V 01A-B2 A32'

(ALD-YB643)

(ALD-YB241)

and DC-GND.

Check and repair board wiring or replace board 01A-A2.

Go to Page 2, Step 010, Entry Point Z.

15SEP82

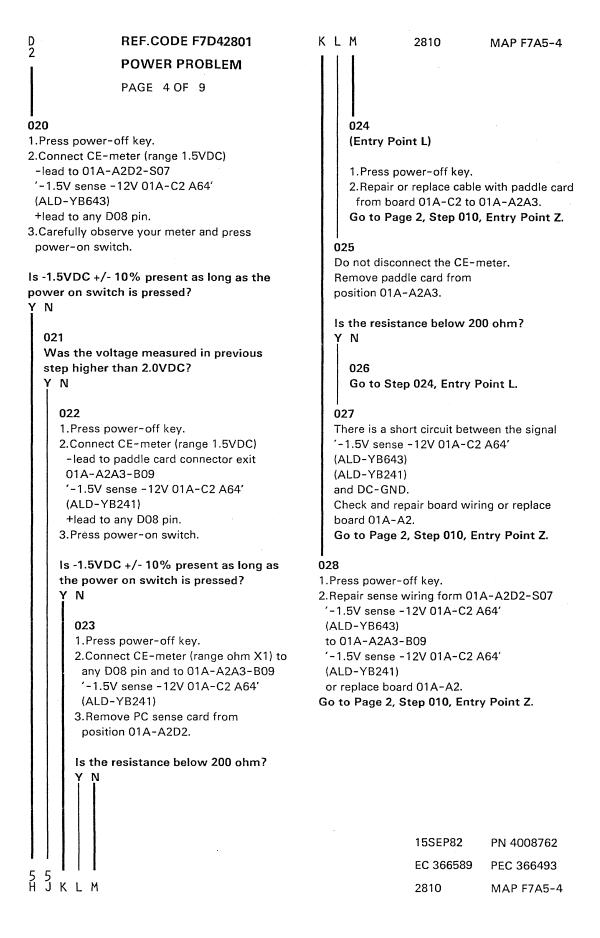
PN 4008762

EC 366589

PEC 366493

2810

MAP F7A5-3



REF.CODE F7D42801 POWER PROBLEM PAGE 5 OF 9 029 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A3. (ALD-YB241) Go to Page 2, Step 010, Entry Point Z. 030 1. Press power-off key. 2. Exchange both PC sense cards in positions 01A-A2D2 and 01A-A2C2. 3. Press power-on switch and wait approximately one minute. Is the *power complete* indicator on? Y N 031 (Entry Point H) Is any reference code displayed? YN 032 (Entry Point Y) Go To Map 0200, Entry Point A. 033 Is reference code F7D42801 displayed? Y N 034 1. Press power-off key. 2. Replace PC sense card in position 01A-A2C2. Go to Page 2, Step 010, Entry Point Z. 035 Suspect power program error. Retry power on with the diagnostic diskette. If the problem is not solved Go to Page 8, Step 057, Entry Point X.

N 2810 MAP F7A5-5

036

1.Press power-off key.
2.Replace PC sense card which is now in position 01A-A2C2.
3.Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

Y N
037
Go to Step 031, Entry Point H.
038
Go to Page 2, Step 010, Entry Point Z.

15SEP82 PN 4008762 EC 366589 PEC 366493 2810 MAP F7A5-5

PAGE 6 OF 9

039 (Entry Point E)

1. Run voltage measurement program. 2. Check the following voltages for out of tolerance.											
Addr	Bit	s 	Volta	ages		from bo	oard	sense 	No.	Corr	esponding MAP
85	4	1	+8.5V	PS104	1	01A-C2	MSSS	A4	6		F799
97	l 5	1	-5.1V	PS104	1	01A-C2		l A3	3	 	F79B
95	l 5		-12V	PS104		01A-C2		A6	4	 	F79C
97	1 0	1	-12V	PS104	l	01A-A2		I A4	3	 	F79D
85	3		+5.1V	PS104	1	01A-C2	or B1*	A4	4	 	F798
97	1		-5.1V	PS104		01A-C2	MSSS	l A4	5	 	F79E
97	7	1	+8.5V	PS104	1	01A-C2		l A3	1		F79A
85	7		+8.5V	PS104		01A-B2		A2	3	 	F79F
87	2		+5.1V	PS104	1	01A-C2		l A3	0	 	F7A0
85	1 2		+12V	PS104	ĺ	01A-A2	MSSS	I A4	2	 	F797
95	10		-12V	PS104		01A-B2		l A3	2	 	F7A1
97	3	I	+5.1V	PS104		01A-C2		l A2	2	 	F7A2
95	1	-	-5.1V	PS104		01A-B1		I A6	3		F7A6
97	6		-5.10	PS104	1	01A-A1		l A0	1		F7AA
A5	1		+12V	PS104		01A-B1		A4	8		F7A8
A5	10		+12V	PS104		01A-A1		A1	3		F7A7

^{*} For 4321/4331-1 is the sense point A44 on 01A-C2. For 4331-2/4331-11 is the sense point A44 on 01A-B1.

(Step 039 continues)

15SEP82 PN 4008762 EC 366589 PEC 366493 2810 MAP F7A5-6

ST

2810

MAP F7A5-7

```
PAGE 7 OF 9
(Step 039 continued)
Are all voltages below maximum limit?
Y N
  040
  Is more than one not sense line out of
  tolerance?
  ΥN
     041
     (Entry Point K)
     Is sense line A64 -12V PS104 on
     01A-C2 out of tolerance?
     Address 95, bit 5)
     Y N
       042
       Go to MAP according to table after
       ENTRY POINT E.
       Go to Page 6, Step 039, Entry Point E.
     043
     Connect CE-meter (range 15VDC)
     -lead to 01A-C2W3-A01
     '-X.XV sense PS1045 A-C2 A64/62'
     (ALD-YC871)
     +lead to any D08 pin
     'DC-GND'
     Is -12VDC +/- 1.0V present?
     ΥN
       Connect CE-meter (range 15VDC)
       -lead to 01A-C2W5-E01
        '-X.XV PS1045 to 01A-C2 K/W CA'
        +lead to any D08 pin
        'DC-GND'
        (ALD-YC871)
       Is -12VDC +/-1.0V present?
```

```
045
  (Entry Point G)
  1. Press power-off key.
  2.Connect CE-meter (range 15VDC)
    -lead to 01A-A2W4-E14
   '-12V PS104 to 01A-C2 K/W CA'
   +lead to any D08 pin.
   'DC-GND'
    (ALD-YC831).
  3. Press power-on switch.
  Was -12V at least momentarily present?
  Y N
     046
     1.Press power-off.
     2. Check and repair board wiring for
      -12VDC from PS104 on board 01A-A2
      (ALD-YC831)
      or replace board 01A-A2.
     Go to Page 2, Step 010, Entry Point Z.
  047
  1.Press power-off key.
  2. Check and repair or replace cable from
   01A-A2W4
   to 01A-C2W5.
   (ALD-YC831)
   (ALD-YC871)
  Go to Page 2, Step 010, Entry Point Z.
048
1. Press power-off key.
2. Remove all cards from board 01A-C2 column
3.Connect CE-meter (range 15VDC)
 -lead to 01A-C2W3-A01
 '-X.XV sense PS1045 A-C2 A64/62'
 (ALD-YC871)
 +lead to any D08 pin.
4. Press power-on switch.
Is -12VDC +/- 1.0V present?
                15SEP82
                             PN 4008762
                EC 366589
                            PEC 366493
                2810
                             MAP F7A5-7
```

2810

MAP F7A5-8

W X

063
Go to corresponding MAP.

Go To Map 0275, Entry Point A.

15SEP82 PN 4008762 EC 366589 PEC 366493 2810 MAP F7A5-9

PAGE 1 OF 5

ENTRY POINTS

EXIT POINTS

FROM	ENTER	THIS MAP		EXIT TH	IS MAP	ТО		
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER	PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT	
F7XX	A	1	001	5	039	F7A9	F	
0200	Α	1	001	2	005	0200	Α	
0260	Α	1	001	3	013	0204	Α	
				4	033	0275	Α	

001

Symptom:

PS104 -5.1V on 01A-B1 out of tolerance, A63.

Suspected errors or FRU's (including intermittent errors)
1 Load fault on 01A-B1,01A-A2,
01A-C2 or any diskette drive.
2 PC sense card 1 in pos. 01A-A2D2.
3 -5.1VDC distibution via 01A-A2.
4 PS104.
5 TR104.
6 A63 sense wiring.
7 Voltage divider 01A-A2A2.
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# (Entry Point A)

- 1.Switch to CE-mode at CE panel.
- 2. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

Y N Is the reference code F7F43001 displayed? © Copyright IBM Corp. 1980 REF.CODE F7F43001 4331-2

18JUL80 PN 5683435 EC 366387 PEC 366356 2811 MAP F7A6-1

**REF.CODE F7F43001** H 2811 MAP F7A6-2 **Power Problem** PAGE 2 OF 5 003 009 Is any other reference code displayed? (Entry Point E) Y N 1. Press power-off switch. 004 2. Disconnect FDS connector 01A-A2ZC. 1. Press power-off switch. 3.Connect CE-meter (range 15VDC) to -2. Observe the *base power on* indicator and 01A-A2H6-D04 or press power-on switch. 01A-A2H6-E04 or 01A-A2H6-E02 (-) Is the *base power on* indicator on as long '-5.1V PS104 to 01A-B1 PU/BSM' as the power on switch is pressed? (ALD-YB233) and to any D08 pin (+) Y N 'DC-GND' 4. Observe your meter and press power-on 005 switch. Go To Map 0200, Entry Point A. Was -5.1VDC present as long as the 006 power-on switch was pressed? 1. Press power-off switch. 2.Switch to CE-mode at CE panel. 010 3. Press power-on switch and wait approximately one minute. 1.Press power-off switch. Suspect defective -5.1V net on baord Is the *power complete* indicator on? 01A-A2. Replace board 01A-A2. Y N Go to Page 3, Step 013, Entry Point Z. 011 Is the reference code F7F43001 1.Press power-off switch. displayed? 2.Connect CE-meter (range 15VDC) to Ν 01A-A2H6-B04 or 01A-A2H6-B02 '-5.1V sense PS104 01A-B1 A63' 800 (ALD-YB233) Is any other reference code and to any D08 pin (+) displayed? 'DC-GND' 3. Observe your meter and press power-on switch. Was -5.1VDC present as long as the power on switch was pressed? 18JUL80 PN 5683435 EC 366387 PEC 366356 4 4 ° 2811 MAP F7A6-2 K 2 REF.CODE F7F43001 **Power Problem** PAGE 3 OF 5 012 1. Reconnect FDS connector to 01A-A2ZC. 2. Disconnect connector 01A-B1B4 (accessible from card side) 3. Use your CE-meter (range ohm x1) and check for continuity between the following pins (use the disconnected cable connector 01A-B1B4 for the measurements) from 01A-A2H6-D04 | 01A-B1B4-A23 01A-A2H6-E02 | 01A-B1B4-A24 01A-A2H6-E04 | 01A-B1B4-A22 01A-A2H6-B04 | 01A-B1B4-A19 01A-A2H6-B02 | 01A-B1B4-A18 (ALD-YB233) | (ALD-YC843) Is continuity present as shown in the previous table? NY 013 Replace the cable from 01A-B1B4 to 01A-A2ZC. (Entry Point Z) Go To Map 0204, Entry Point A. 014 Use your CE-meter (range ohm x1) and check for continuity between all following listed points on board 01A-B1. 01A-B1B4-A22 (ALD-YC843) 01A-B1B4-A23 (ALD-YC843) 01A-B1B4-A24 (ALD-YC843) 01A-B1B4-A18 (ALD-YC843) 01A-B1B4-A19 (ALD-YC843) Is the measured resistance zero ohm? Y N 015 Replace board 01A-B1. Go to Step 013, Entry Point Z.

2811 MAP F7A6-3 016 Suspect connector problem of 01A-B1B4 (ALD-YC843) or 01A-A2ZC (ALD-YB233) Check the connectors carefully and repair or replace the failing parts. Go to Step 013, Entry Point Z. 017 1. Press power-off switch. 2. Reconnect FDS connector 01A-A2ZC. 3.Connect CE-meter (range 15VDC) to 01A-A2A2-D10 (ALD-YB241) '-5.1V sense PS104 01A-B1 A63' 4. Observe your meter and press power-on switch. Was -5.1VDC present as long as the power-on switch is pressed? Y N 018 Repair wiring between the pins listed in the previous step or replace board 01A-A2. Go to Step 013, Entry Point Z. 1.Connect CE-meter (range ohm x1) to 01A-A2A2-D10 '-1.5V sense -5.1V 01A-B1 A63' (ALD-YB241) and to any D08 pin. 2.Remove PC sense card 1 from 01A-A2D2 and paddle card from 01A-A2A2. 3. Disconnect connector 01A-B1B4. Is the resistance below 100 ohm? 18JUL80 PN 5683435

EC 366387

2811

PEC 366356

MAP F7A6-3

M N 3 **REF.CODE F7F43001** D E F G 2 2 2 **Power Problem** PAGE 4 OF 5 020 Connect CE-meter (range ohm X1) to 01A-A2A2-B07 and to 01A-A2D2-U09 '-1.5V sense -5.1V 01A-B1 A63' Is the resistance below 100 ohm? N 021 (Entry Point F) 1. Repair wiring from 01A-A2A2-B07 to 01A-A2D2-U09 '-1.5V sense -5.1V 01A-B1 A63' or replace board 01A-A2. 2. Reconnect connector 01A-B1B4. Go to Page 3, Step 013, Entry Point Z. 022 Do not disconnect the lead 1 of your meter which is connected to 01A-A2A2-B07 2. Connect lead 2 of your meter to any D08. Is the resistance below 100 ohm? Y N 023 1.Press power-off switch. 2. Replace cable and paddle card with resistor network in position 01A-A2A2. 3. Reconnect connector 01A-B1B4. Go to Page 3, Step 013, Entry Point Z. Go to Step 021, Entry Point F.

# 025

There is a short circuit to ground. 1.Repair wiring of signal '-1.5V sense -5.1V 01A-B1 A63' (ALD-YB241) or replace board 01A-A2. 2. Reconnect connector 01A-B1B4. Go to Page 3, Step 013, Entry Point Z.

026 Go to corresponding MAP. 027 (Entry Point D) 1.Press power-off key. 2.Exchange both PC-sense cards in position 01A-A2D2 and 01A-A2C2. 3. Press power-on switch and wait approximately one minute. Is the reference code F7F43001 displayed? Y N 028 1.Press power-off key. 2. Replace PC-sense card in position 01A-A2C2. Go to Page 1, Step 001, Entry Point A. Go to Page 2, Step 009, Entry Point E. 030 Run voltage measurement program. Is address 95 bit 1 out of tolerance? Y N 031 Is any other voltage out of tolerance? Y N Go to Page 3, Step 013, Entry Point Z. Go To Map 0275, Entry Point A. 034 Go to Step 027, Entry Point D. Go to corresponding MAP.

2811

MAP F7A6-4

18JUL80 PN 5683435 EC 366387 PEC 366356 2811 MAP F7A6-4



A B REF.CODE F7F43001

2811

MAP F7A6-5

**Power Problem** 

PAGE 5 OF 5

#### 036 (Entry Point C)

1.Press power-off key.2.Exchange both PC-sense cards in positions 01A-A2D2 and 01A-A2C2.3.Press power-on switch and wait

approximately one minute.

Is the reference code F7F43001 displayed?

Y N

037

1.Press power-off switch.
2.Replace PC-sense card in position 01A-A2C2.
Go to Page 1, Step 001, Entry Point A.

038 Go to Page 2, Step 009, Entry Point E.

039

Suspect intermittent voltage failure. Run voltage measurement program according to MAP 0275. If there is a single voltage failure of -5.1V of PS104
Go To Map F7A9, Entry Point F.

18JUL80

PN 5683435

EC 366387

PEC 366356

2811

MAP F7A6-5

#### POWER PROBLEM

PAGE 1 OF 4

#### **ENTRY POINTS**

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	А	1	001

#### **EXIT POINTS**

EXIT TH	IS MAP	ТО	
PAGE	STEP	MAP	ENTRY
NUMBER	NUMBER	NUMBER	POINT
1	003	0200	A
	020	0202	A
3	023	0204	Α

#### 001

Symptom:

PS104 ÷12V on 01A-A1 out of tolerance, A13.

Suspected errors or FRU's (including intermittent errors) | 1 | PC sense card O1A-A2D2. | 2 | +12V DC distribution. | 3 | A13 sense wiring. | 4 | PS104. | 5 | TR104.

#### (Entry Point A)

- 1. Press power off key.
- 2.Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approximately one minute.

Is the "power complete" indicator on?

NY

002

Is the Base power on indicator on?

NY

003

(Entry Point C)

Go To Map 0200, Entry Point A.

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REF.CODE F7D43201

4331

18JUL80

PN 4008764

EC 366387

PEC 366356

2812

MAP F7A7-1

REF.CODE F7D43201 D 2812 MAP F7A7-2 Power Problem PAGE 2 OF 4 004 011 Is the reference code F7D43201 displayed? 1.Press power-off key. 2.Connect CE-meter (range 15VDC) Y N +lead to 01A-A1G6-C04 '+12V sense PS104 01A-A1 A13' (ALD-YC821) Is any other reference code displayed? Y N -lead to any D08 pin 3. Observe meter and press power-on switch. 006 Go to Page 1, Step 003, Entry Point C. Is 12VDC at least momentarily present? 012 Go to corresponding MAP. 1.Press power-off key. 2.Connect CE-meter (range 15VDC) 008 (Entry Point B) +lead to 01A-A1B4-A14 '+12V PS104 to 01A-A1 CD ATT' 1. Press power-off key. (ALD-YC821) 2.Exchange both PC-sense cards in -lead to any D08 pin. positions 01A-A2D2 and 01A-A2C2. 3. Observe meter and press power-on 3. Press power-on switch and wait switch. approximately one minute. Is 12VDC at least momentarily present? Is the reference code F7D43201 displayed? A M 013 009 1.Press power-off switch. 1.Press power-on key. 2.Check and repair wiring from 2.Replace PC-sense card in connector PS104-07-007 or position 01A-A2C2. PS104-07-008. Go to Page 1, Step 001, Entry Point A. '+12V PS104 to 01A-A1 CD ATT' (ALD-YA451) to 01A-A1B4-A14 or 01A-A1B5-E01 010 (ALD-YC821) 1. Press power-off key. 2.Connect CE-meter (range 5VDC) Go to Page 3, Step 023, Entry Point Z. +lead to 01A-A2C2-B07 '+1.5V sense +12V 01A-A1 A13' (ALD-YB621) -lead to any DOS pin 3. Observe meter and press power-on switch. Is 1.5VDC at least momentarily present? 18JUL80 PN 4008764 EC 366387 PEC 366356

2812

MAP F7A7-2



E F 2 REF.CODE F7D43201 **Power Problem** PAGE 3 OF 4 014 1. Press power-off switch. 2.Check and repair wiring from 01A-A1B4-A14 and 01A-A1B5-E01 '+12V PS104 to 01A-A1 CD ATT' (ALD-YC821) to 01A-A1G6-C04 '+12V sense PS104 01A-A1 A13' (ALD-YC821) or replace board 01A-A1. Go to Step 923, Entry Point Z. 015 1. Press power-off switch. 2.Connect CE-meter (range 15VDC) to 01A-A2A4-D09 (+) '+1.5V sense +12V 01A-A1 A13' (ALD-YB243) and to any D08 pin (-) 3. Observe meter, and press power-on switch. Is 1.5VDC at least momentarily present? Y N 016 1. Press power-off switch. 2.Remove PC sense card 2 from 01A-A2C2 and paddle card from 01A-A2A4. 3.Connect CE-meter (range ohm X1) to 01A-A2C2-B07 '+1.5V sense +12V 01A-A1 A13' (ALD-YB621) and to any D08 pin. Is the resistance below 100 chm? YN Sense cable from 01A-A1G6-C04 to 01A-A2A4-D09 or resistor network on 01A-A2A4 is defective. 1.Press power-off switch. 2. Repair or replace cable and paddle card with resistor network in position 01A-A2A4. Go to Step 023, Entry Point Z.

ACGH 2317 MAP F7A7-3 There is a short circuit to ground. Go to Step 019, Entry Point D. 019 (Entry Point D) 1.Press power-off switch. 2.Check and repair wiring from 01A-A2A4-D09 (ALD-YB243) to 01A-A2C2-B07 (ALD-YB621) '+1.5V sense +12V 01A-A1 A13' or replace board 01A-A2. Go to Step 023, Entry Point Z. 020 Go To Map 0202, Entry Point A. 021 Run voltage measurement program. Is address A5 bit 0 out of tolerance? 022 is any other voltage out of telerance? NY 023 (Entry Point Z) Go To Map 0204, Entry Point A. Go to Step 023, Entry Point Z.

> 18JUL80 PN 4008764 EC 366387 PEC 366356 2812 MAP F7A7-3

G H

J 3 REF.CODE F7D43201 **Power Problem** PAGE 4 OF 4 025 Connect CE-meter (range 15VAC) to connector PS104-09-001 or PS104-09-003 '12.6VAC' and to connector PS104-09-002 'Center' (ALD-YA451) Is 12.6VAC present? N Y 026 1.Press power-off key. 2.Check input line connection to TR104 according to customers line voltage. For correct connection see (ALD-YA451) (ALD-YA021) 3.Check connector PS104-09 and wiring between TR104 and PS104. If no error detected, replace TR104. Go to Page 1, Step 001, Entry Point A. 027 Connect CE-meter (range 15VDC) to connector PS104-09-001 or PS104-09-003 '+12.6VAC' and to connector PS104-09-002 'Center' (ALD-YA451) Is 12.2VAC present? A M

Go to Page 3, Step 023, Entry Point Z.

029 Connect CE-meter (range 15VDC) +lead to connector PS104-07-007 or PS104-07-008 '+12V PS104 to 01A-A1 CD ATT' (ALD-YA451) -lead to PS104-07-005 'DC-GND' Is 12VDC present? Y N 030 1.Press power-off key. 2.Replace PS104. Go to Page 1, Step 001, Entry Point A. 031 Go to Page 2, Step 008, Entry Point B.

2812

**MAP F7A7-4** 

K

18JUL80 PN 4008764 EC 366387 PEC 366356 2812 MAP F7A7-4

## REF.CODE F7F43401 FIX 0000 POWER PROBLEM

PAGE 1 OF 5

#### **ENTRY POINTS**

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	А	1	001

#### **EXIT POINTS**

EXIT TH	IS MAP	ТО	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY
2	003	0200	Α
4	028	0202	Α
5	031	0204	Α
3	015	0250	Α
5	032	0275	Α

#### 001

Symptom:

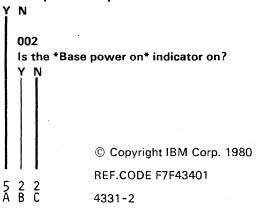
PS104 +12V on 01A-B1 out of tolerance, A48.

Suspected errors or FRU's   (including intermittent errors)
1   PC sense card 01A-A2D2.   2   +12VDC distribution.   3   A48 sense wiring.   4   PS104.   5   TR104.   6   Voltage divider 01A-A2A2.

#### (Entry Point A)

- 1. Press power off key.
- 2. Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approximately one minute.

#### Is the *power complete* indicator on?



18JUL80

PN 5683436

EC 366387

PEC 366356

2813

MAP F7A8-1

REF.CODE F7F43401 2813 MAP F7A8-2 **Power Problem** PAGE 2 OF 5 003 010 (Entry Point C) 1.Press power-off key. 2.Connect CE-meter (range 5.0VDC) Go To Map 0200, Entry Point A. +lead to 01A-A2C2-B10 '+1.5V sense +12V 01A-B1 A48' 004 (ALD-YB621) Is the reference code F7F43401 displayed? -lead to any D08 pin 3. Observe meter and press power-on switch. 005 Was approximately 1.5VDC present as long Is any other reference code displayed? as the power-on switch was pressed? Ν 006 011 Go to Step 003, Entry Point C. 1.Press power-off key. 2.Connect CE-meter (range 15VDC) 007 +lead to 01A-A2A2-D13 Go to corresponding MAP. '+12V sense PS104 01A-B1 A48' (ALD-YB241) -lead to any D08 pin (Entry Point B) 3. Observe meter and press power-on switch. 1. Press power-off key. 2. Exchange both PC-sense cards in Was approximately 12VDC present as positions 01A-A2D2 and 01A-A2C2. long as the power-on switch was 3. Press power-on switch and wait pressed? approximately one minute. Y N Is the reference code F7F43401 displayed? 012 Y N 1. Press power-off key. 2. Disconnect FDS cable from 01A-A2ZC 009 pin side. 1. Press power-off key. 3.Connect CE-meter (range 15VDC) 2. Replace PC-sense card in +lead to 01A-A2F6-D02 position 01A-A2C2. '+12V sense PS104 01A-B1 A48' Go to Page 1, Step 001, Entry Point A. (ALD-YB233) -lead to any D08 pin. 4. Observe meter and press power-on switch. Was approximately 12VDC present as long as the power-on switch was pressed? 18JUL80 PN 5683436 EC 366387 PEC 366356 2813 MAP F7A8-2



H REF.CODE F7F43401

Power Problem

PAGE 3 OF 5

013

1.Press power-off switch.
2.Reconnect FDS connector to 01A-A2ZC pin side.
3.Connect CE-meter (range 15VDC) to 01A-B1E1-B13 (+)
'(+12V PS104 TP)'
(ALD-YC843)

Was approximately 12VDC present as log as the power-on switch was pressed?

4. Observe your meter and press power-on

and to 01A-B1E1-D13 (-)

### YN

#### 014

'DC-GND'

switch.

1.Press power-off switch.
2.Connect CE-meter (range 15VDC) to connector PS104-06-007 (+)
'+12V PS104 to 01A-B1 PU/BSM'
(ALD-YA451)
and to PS104-06-004 (-)
'DC-GND'
3.Observe meter and press power-on switch.

Was approximately 12VDC present as long as the power-on switch was pressed?

Y N

015 Go To Map 0250, Entry Point A. MAP F7A8-3

016

1.Press power-off switch.
2.Disconnect connector 01A-B1A1-D13 and 01A-B1A1-E13.
3.Use your CE-meter (range ohm X1) and check for continuity between female connector 01A-B1A1-D13 or 01A-B1A1-E13 (ALD-YC843)

#### Is continuity present?

PS104-06-009

(ALD-YA541)

and connector PS104-06-007 or

'+12V PS104 to 01A-B1 PU/BSM'

Y N

#### 017

Check and repair or replace wiring from connector PS104-06-007 and PS104-06-009
'+12V PS104 to 01A-B1 PU/BSM'
(ALD-YA451)
to 01A-B1A1-D13 and 01A-B1A1-E13
(ALD-YC843)
Go to Page 5, Step 031, Entry Point Z.

#### 018 (Entry Point D)

1.Disconnect connector 01A-B1B4 (accessible from card side)
2.Use your CE-meter and check for continuity between pin 01A-B1A1-D13 or
01A-B1A1-E13
'+12V PS104 to 01A-B1 PU/BSM'
(ALD-YC841)
and sense connector pin 01A-B1B4-A02 or
01A-B1B4-A03
'+12V sense PS104 01A-B1 A48'
(ALD-YC841)

#### Is continuity present?

YN		
	18JUL80	PN 5683436
1. 1.	EC 366387	PEC 366356
LM	2813	MAP F7A8-3

ĸ

**REF.CODE F7F43401** 

**Power Problem** 

PAGE 4 OF 5

019

1.Replace board 01A-B1.

2. Reconnect all disconnected connectors.

Go to Page 5, Step 031, Entry Point Z.

020

1. Replace the sense wiring from 01A-B1B4 to 01A-A2ZC.

2. Reconnect all disconnected connectors.

Go to Page 5, Step 031, Entry Point Z.

Go to Page 3, Step 018, Entry Point D.

#### 022

1.Press power-off switch.

2.Reconnect FDS cable to 01A-A2ZC pin side.

3.Check and repair wiring from

01A-A2F6-D02

'+12V sense PS104 01A-B1 A48'

(ALD-YB233)

to 01A-A2A2-D13

(ALD-YB241)

Go to Page 5, Step 031, Entry Point Z.

#### 023

1.Press power-off switch.

2.Connect CE-meter (range ohm X1)

to 01A-A2A2-D11

'+1.5V sense +12V 01A-B1 A48'

(ALD-YB241)

and to any D08 pin.

3.Remove PC sense card 2 form 01A-A2C2

and paddle card from 01A-A2A2.

Is the resistance below 100 ohm?

N P

2813

MAP F7A8-4

024

Connect CE-meter (range ohm X1) to 01A-A2A2-D11 and to 01A-A2C2-B10 '+1.5V sense +12V 01A-B1 A48' (ALD-YB241)

(ALD-YB621)

Is the resistance below 100 ohm?

025

Repair wiring from 01A-A2A2-D11

(ALD-YB241):

to 01A-A2C2-B10

(ALD-YB621) //

'+1.5V sense +12V 01A-B1 A48'

or replace board 01A-A2.

Go to Page 5, Step 031, Entry Point Z.

026

1. Press power-off switch.

2. Replace cable and paddle card with resistor network in position 01A-A2A2.

3.Plug the removed cards into their

positions and install all top connectors.

Go to Page 5, Step 031, Entry Point Z.

027

There is a short circuit to ground. Repair wiring of signal

'+1.5V sense +12V 01A-B1 A48'

(ALD-YB241)

or replace board 01A-A2.

Go to Page 5, Step 031, Entry Point Z.

028

Go To Map 0202, Entry Point A.

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MAP F7A8-4

If no error detected, replace TR104. Go to Page 1, Step 001, Entry Point A.

O35
Connect CE-meter (range 15VDC)
+lead to connector PS104-06-009
'+12V PS104 to 01A-B1 PU/BSM'
(ALD-YA451)
-lead to PS104-06-004
'DC-GND'

Is approximately 12VDC present?
Y N

O36
1.Press power-off key.
2.Replace PS104.
Go to Page 1, Step 001, Entry Point A.

O37
Go to Page 2, Step 008, Entry Point B.

2813

MAP F7A8-5

Q

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PN 5683436

EC 366387

PEC 366356 MAP F7A8-5

2813

#### REF.CODE F7D43601 FIX 0000 POWER PROBLEM

PAGE 1 OF 3

2814

MAP F7A9-1

#### **ENTRY POINTS**

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER
F7A6	D	3	018
F7A6	F	2	010
F7XX	A	1	001

#### EXIT POINTS

EXIT THIS MAP		то	
PAGE	STEP	MAP	ENTRY
NUMBER	NUMBER	NUMBER	POINT
2 3	008	0200	A
	019	0204	A

#### 001

Symptom:

PS104 -5.1V on 01A-B1 and 01A-C2 failing A63 and A45.

-	Suspected errors or FRU's		
1		n (	cluding intermittent errors)
i	1		Load fault on O1A-B1,01A-A2,
!	_	•	01A-C2.
ļ			PC sense card 1 in pos. 01A-A2D2.1
ı			-5.1VDC distibution via 01A-A2.
1	4	1	PS104.
1	5	1	TR104.
1	6	1	A45 sense wiring.
ı	7	1	A63 sense wiring.
1	8		Diskette drive control card.
ı			

#### (Entry Point A)

Note:

The -5.1V from PS104 (sense points A45 and A47) are also used by the power on test for a DAC-test of both PC-sense cards.

- 1.Press power-off key.
- 2.Press power-on switch and wait approximately one minute.

Is the reference codo F7D43601 displayed?

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REF.CODE F7D43601

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18JUL80 PN 4008766 EC 366387 PEC 366356 2814 MAP F7A9-1

REF.CODE F7D43601 2814 MAP F7A9-2 **Power Problem** PAGE 2 OF 3 002 010 Is any other reference code displayed? (Entry Point F) YN 1.Press power-off key. 003 2.Exchange both PC-sense cards in positions (Entry Point C) 01A-A2D2 and 01A-A2C2. 3.Press power-on switch and wait Suspect intermittent voltage failure. Run approximately one minute. voltage measurement program according to MAP 0275. If there is a single voltage Is the reference code F7D43601 displayed? failure of -5.1V from PS104, A M Go to Step 010, Entry Point F. 011 1.Press power-off switch. Go to MAP for displayed reference code. 2.Replace PC-sense card in position 01A-A2C2. 005 Go to Page 1, Step 001, Entry Point A. 1.Switch to CE-mode at CE panel. 2.Press power-on switch and wait 012 Is PS105 installed? approximately one minute. N Is the "power complete" indicator on? 013 Are cards installed in board 01A-C2 លាន columns K to W? is the reference code F7D43601 Y N displayed? N Go to Page 3, Step 018, Entry Point D. Is any other reference code displayed? 015 1.Remove all cards from board 01A-C2 N Y columns K to W. **ODB** 2.Press power-on switch and wait (Entry Point B) approximately one minute. Go To Map 0200, Entry Point A. Is reference code F7D43601 diaplayed? Go to corresponding MAP. 18JUL80 PN 4008766 EC 366387 PEC 366356 3 3 3

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MAP F7A9-2

E F G 2 2 2

#### **REF.CODE F7D43601**

#### Power Problem

PAGE 3 OF 3

016

Suspect overload condition caused by a faulty card on board 01A-C2 col. K to W.

- 1.Press power-off switch.
- 2.Replug cards step by step. After each step press power-on switch and wait approximately one minute.
- 3. Replace the defective card which generated reference code F7D43601.
- 4.Press power-on switch and wait approximately one minute.
  Go to Stop 019, Entry Point Z.

017

- 1.Press power-off switch.
- 2.Reinstall all cards into board 01A-C2 col. K to W.

Go to Stop 018, Entry Point D.

018

(Entry Point D)

Suspect intermittent load faults caused by a defective card on board 01A-B1 or on board 01A-C2 columns C to F or on board 01A-A2 columns K. N. Q and R.

- 1. Replace the previous listed cards step by step. After each step press power-on switch and weit approximately one minute.
- 2. The card which generated reference code F7D43601 or F7D43001 must be replaced by a new one. All other card must be plugged into their original positions again.
- 3.Press power-on switch and wait approximately one minute.

Is reference code F7D43601, F7E43601 or F7F43601 displayed?

V N

019

(Entry Point Z)

Go To Map 0204, Entry Point A.

2814

MAP F7A9-3

020

Press power-off switch.

Is an I/O disketto drivo installed?

A N

021

(Entry Point E)

Suspect an intermittent load fault caused by the system diskette drive control card. Replace the control card of the system diskette drive.

Ge to Stop 019, Entry Point Z.

022

- 1.Disconnect connector PS104-03 'DC voltages PS104 to 53FD I/O'
- (ALD-YA451)
- 2.Press power-on switch and wait approximately one minute.

le roference code F7D43601 displayed?

023

- 1.Press power-off switch.
- 2.Replace the I/O diskette drive control card.
- Go to Stop 019, Entry Point Z.

024

Go to Step 021, Entry Point E.

029

Go to Paga 2, Stop 603, Entry Point C.

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MAP F7A9-3

#### **REF.CODE F7D43801 FIX 0000**

#### **POWER PROBLEM**

PAGE 1 OF 8

#### **ENTRY POINTS**

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER
F7XX	A	1	001
0200	C	2	009
0260	A	1	001

#### **EXIT POINTS**

EXIT THIS MAP		ТО	
PAGE	STEP	MAP	ENTRY
NUMBER	NUMBER	NUMBER	POINT
4 4 5 2	024 027 030	0200 0202 0204	A A A
8	007	0250	A
	051	0260	A

2815

MAP F7AA-1

#### 001

Symptom:

PS104 -5.1V on 01A-A1 out of tolerance, A01.

	Suspected errors or FRU's cluding intermittent errors)
2     3     4     5     6	PC sense card 01A-A2D2. -5.1VDC distribution. Load fault. A01 sense wiring. PS104. TR104. Line voltage distribution.

#### (Entry Point A)

- 1.Press power-off key.
- 2. Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approximately one minute.

#### Is the *power complete* indicator on?

Y N 002 Is reference code F7D43801 displayed? © Copyright IBM Corp. 1980 REF.CODE F7D43801 4331

18JUL80 PN 4008767 EC 366387 PEC 366356 2815 MAP F7AA-1

REF.CODE F7D43801 2815 MAP F7AA-2 **Power Problem** PAGE 2 OF 8 009 Is any other reference code displayed? YN (Entry Point C) 004 1.Press power-off key. Go to Page 4, Step 024, Entry Point Y. 2. Ensure that connector on 01A-A1B4-E14 is seated correctly. 3.Connect CE-meter (range 15VDC) Go to MAP for displayed reference code. -lead to 01A-A1B4-E14 '-5.1V PS104 to 01A-A1 CD ATT' 006 (ALD-YC821) 1.Press power-off key +lead to any D08 pin. 2.Connect CE-meter (range 15VDC) The +lead of your meter must be connected -lead to connector PS104-07-001 without removing the connector. '-5.1V PS104 to 01A-A1 CD ATT' 4. Press power-on switch. (ALD-YA451) +lead to connector PS104-07-002 Is -5.1VDC at least momentarily present? 3.Press power-on switch. NY Is -5.1VDC at least momentarily present? Go to Page 6, Step 038, Entry Point M. 007 011 (Entry Point B) 1.Press power-off key. 2.Board wiring of -5.1V net defective. Go To Map 0250, Entry Point A. Replace board 01A-A1. Go to Page 5, Step 030, Entry Point Z. 800 1Press power-off key. 012 2.Connect CE-meter (range 15VDC) 1.Press power-off key. -lead to 01A-A1H6-B02 2.Connect CE-meter (range 1.5VDC) '-5.1V sense PS104 01A-A1 A01' -lead to 01A-A2D2-P13 '-1.5V sense -5.1V 01A-A1 A01' (ALD-YC821) +lead to any D08 pin. (ALD-YB643) The +lead of your meter must be connected +lead to any D08 pin. without removing the connectors. 3. Carefully observe your meter and press 3. Press power-on switch. power-on switch. Was -1.5VDC +/-10% at least momentarily Is -5.1VDC at least momentarily present? present? 18JUL80 PN 4008767 EC 366387 PEC 366356

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Was the voltage measured in previous step higher than 2.0VDC.

Ν

#### 014

1.Press power-off key.

2.Connect CE-meter (range 1.5VDC)

-lead to paddle card connector exit

01A-A2A4-D10

'-1.5V sense -5.1V 01A-A1 A01'

(ALD-YB243)

+lead to any D08 pin.

3. Press power-on switch.

#### Was -1.5VDC at least momentarily present?

Y N

#### 015

1. Press Power-off key.

2. Remove PC sense card from position 01A-A2D2.

3.Connect CE-meter (range ohm X1) to any D08 pin and to

01A-A2A4-D10

'-1.5V sense -5.1V 01A-A1 A01' (ALD-YB243)

Is the resistance below 200 ohm?

Y N

#### 016

(Entry Point L)

1.Press power-off key.

2. Repair or replace cable with paddle card from board 01A-A1 to 01A-A2A4.

Go to Page 5, Step 030, Entry Point Z.

HJK

MAP F7AA-3

#### 017

Do not disconnect the CE-meter. 1.Remove paddle card from position 01A-A2A4.

2815

Is the resistance below 200 ohm?

Y N

#### 018

Go to Step 016, Entry Point L.

There is a short circuit between the signal '-1.5V sense -5.1V 01A-A1 A01' (ALD-YB643) (ALD-YB243) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 030, Entry Point Z.

#### 020

1.Press power-off key.

2.Repair sense wiring from 01A-A2D2-P13

'-1.5V sense -5.1V 01A-A1 A01'

(ALD-YB643)

to 01A-A2A4-D10

'-1.5V sense -5.1V 01A-A1 A01'

(ALD-YB243)

or replace board 01A-A2.

Go to Page 5, Step 030, Entry Point Z.

#### 021

1.Press power-off key.

2. Replace paddle card with cable in position 01A-A2A4.

Go to Page 5, Step 030, Entry Point Z.

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```
REF.CODE F7D43801
```

#### **Power Problem**

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#### 022

- 1.Press power-off key.
- 2.Exchange both PC sense cards in positions
- 01A-A2D2 and 01A-A2C2.
- 3. Press power-on switch and wait approximately one minute.

#### Is the *power complete* indicator on?

YN

#### 023

(Entry Point H)

Is any reference code displayed?

YN

024

(Entry Point Y)

Go To Map 0200, Entry Point A.

#### 025

Is reference code F7D43801 displayed?

Y N

#### 026

- 1.Press power-off key.
- 2.Replace PC sense card in position 01A-A2C2.
- Go to Page 5, Step 030, Entry Point Z.

#### 027

1. Press power-off switch.

Suspect power program error.

2.Retry power on using the diagnostic diskette. If the problem is not solved.

(Entry Point X)

Go To Map 0202, Entry Point A.

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MAP F7AA-4

MAP F7AA-4

5

#### **Power Problem**

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#### 028

- 1.Press power-off key.
- 2.Replace PC sense card which is now in position 01A-A2C2.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

Y N

029

Go to Page 4, Step 023, Entry Point H.

030

(Entry Point Z)

Go To Map 0204, Entry Point A.

031

(Entry Point E)

Run voltage measurement program.      Check the following voltages for out of tolerance											
Addr	Bit	s	Volt	ages	lfro	om board	se	nse No	o.	Go to MAP	
97 XOR	5	-5	. 1V	PS104	l	01A-C2		A33		F79B	
	1 5	I <b>-</b> 5	.1۷	PS104	1	01A-C2		A33	1	F7B4	
95	1	1-5	. 1۷	PS104		01A-B1	1	A63	1	F7A6	
97	1	-5	.1۷	PS104	1	01A-C2	1	A45	1	F79E	
97	6	-5	. 1V	PS104		01A-A1		A01	ΙE	ntry point K	

Is more than one voltage out of tolerance?

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8 6 M N

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```
REF.CODE F7D43801
                                                0 R
                                                                             MAP F7AA-6
                                                                2815
               Power Problem
               PAGE 6 OF 8
032
                                                   036
(Entry Point K)
                                                   (Entry Point G)
Is -5.1VDC PS104 on 01A-A1 out of
                                                   1.Press power-off key.
tolerance (Address 97, bit 6)?
                                                   2.Connect CE-meter (range 15VDC)
YN
                                                   -lead to connector PS104-07-001
                                                   '-5.1V PS104 to 01A-A1 CD Att'
  033
                                                   +lead to connector PS104-07-002
  Go to MAP according to table after ENTRY
                                                   'DC-GND'
  POINT E.
                                                   (ALD-YA451).
  Go to Page 5, Step 031, Entry Point E.
                                                   3.Press power-on switch.
034
                                                   Is -5.1VDC at least momentarily present?
1.Connect CE-meter (range 15VDC)
                                                   NY
-lead to 01A-A1H6-B02
'-5.1V sense PS104 01A-A1 A01'
                                                     037
(ALD-YC823)
                                                     Go to Page 2, Step 007, Entry Point B.
+Lead to any D08 pin
'DC-GND'
                                                   038
Is -5.1VDC +/-1.0V present?
                                                   (Entry Point M)
NY
                                                   1.Press power-off key.
  035
                                                   2.Repair or replace cable from
  1.Connect CE-meter (range 15VDC)
                                                   connector PS104-07-001
  -lead to 01A-A1B4-E14
                                                  to 01A-A1B04-E14.
  '-5.1V PS105 to 01A-A1 CD ATT'
                                                  (ALD-YA451)
  +lead to any D08 pin
                                                  (ALD-YC821)
  'DC-GND'
                                                  Go to Page 5, Step 030, Entry Point Z.
  (ALD-YC821)
                                                039
  Is -5.1VDC +/-1.0V present?
                                                1.Press power-off key.
                                                2. Remove all cards from board 01A-A1.
                                                3.Connect CE-meter (range 15VDC)
                                                -lead to 01A-A1H6-B02
                                                '-5.1V sense PS104 01A-A1 A01'
                                                (ALD-YC823)
                                                +lead to any D08 pin.
                                                4. Press power-on switch.
                                                Is -5.1VDC +/- 1.0V present?
                                                                18JUL80
                                                                             PN 4008767
                                                                EC 366387
                                                                             PEC 366356
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040 approximately one minute. 042 -lead to 01A-A2D2-P13 'DC-GND'

**REF.CODE F7D43801** 

**Power Problem** 

PAGE 7 OF 8

1.Press power-off key.

2. Suspect sense wiring error on board 01A-A1.

Repair board wiring or replace board 01A-A1.

3. Press power-on switch.

Go to Page 5, Step 031, Entry Point E.

Suspect overload condition caused by a faulty card.

1.Press power-off key.

2. Replug cards step by step. After each step press power on switch, observe your meter reading and wait apporoximately one minute. Replace the defective card which caused incorrect meter reading at sense point. 3. Press power-on switch and wait

Go to Page 5, Step 031, Entry Point E.

## (Entry Point F)

1. Check the accuracy of your CE-meter according to *Hints For Power MAP Usage* in book MI POWER, Vol.16. 2. Check -1.5V voltage at sense card 1 entry: Connect CE-meter (range 5VDC)

'-1.5V sense -5.1V 01A-A1 A01' +lead to any D08 pin.

(ALD-YB643).

Is -1.5VDC +/-10% present?

2815

MAP F7AA-7

#### 043

1.Connect CE-meter (range 1.5VDC)

-lead to 01A-A2A4-D10.

'-1.5V sense -5.1V 01A-A1 A01'

+lead to any D08 pin

'DC-GND'

(ALD-YB243).

2. Press power-on switch.

#### Is -1.5VDC +/-10% present?

Y N

#### 044

1.Press power-off switch.

2.Connect CE-meter (range ohm X1) to

01A-A2D2-P13

'-1.5V sense -5.1V 01A-A1 A01'

(ALD-YB643)

and to any D08 pin.

3.Remove PC sense card 1 from 01A-A2D2 and paddle card from 01A-A2A4.

#### Is the resistance below 100 ohm?

NY

#### 045

There is a short circuit to ground. Check and repair wiring of signal '-1.5V sense -5.1V 01A-A1 A01' (ALD-YB643) or replace board 01A-A2.

Go to Page 4, Step 024, Entry Point Y.

#### 046

1.Press power-off key.

2. Repair or replace cable with paddle card from board 01A-A1 to 01A-A2A4.

Go to Page 5, Step 030, Entry Point Z.

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M U W 5 7 7

#### REF.CODE F7D43801

### **Power Problem**

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#### 047

1.Press power-off key.

2.Repair wiring from 01A-A2D2-P13

(ALD-YB643)

to 01A-A2A4-D10

(ALD-YB243)

'-1.5V sense -5.1V 01A-A1 A01'

or replace board 01A-A2.

Go to Page 5, Step 030, Entry Point Z.

#### 048

1.Press power-off key.

2. Exchange both PC sense cards in positions

01A-A2D2 and 01A-A2C2.

3. Press power-on switch and wait approximately one minute.

4. Run voltage measurement program.

Is address 97 bit 6 out of tolerance?

Y N

#### 049

1.Press power-off key.

2. Replace PC sense card which is now in position 01A-A2C2.

Go to Page 5, Step 030, Entry Point Z.

050

Go to Page 4, Step 027, Entry Point X.

051

Go To Map 0260, Entry Point A.

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MAP F7AA-8

MAP F7AA-8

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#### REF.CODE F7D50001 FIX 0000

#### **POWER PROBLEM**

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#### **ENTRY POINTS**

#### **EXIT POINTS**

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	А	1	001

EXIT TH	IS MAP	то			
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT		
5	019	0204	Α		

2820

MAP F7B0-1

#### 001

Symptom:

TR105 thermal failure, D08

	Suspected errors or FRU's cluding intermittent errors)
2   3   4	PC sense card 01A-A2D2. 24V wiring from PS104 to TR105. BPC card 01A-A2B2. D08 sense wiring. TR105.

#### (Entry Point A)

- 1.Press power-off key.
- 2. Exchange both PC-sense cards in position 01A-A2D2 and 01A-A2C2.
- 3. Press power on switch and wait approximately one minute.

#### Is the reference code F7D50001 displayed?

N

#### 002

- 1.Press power-off key.
- 2. Replace PC sense card which is now in position 01A-A2C2.
- 3. Press power on switch and wait approximately one minute.

Is any reference code displayed?

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MAP F7B0-2

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```
A B C 1 1 1
               REF.CODE F7D50001
               Power Problem
               PAGE 2 OF 5
     003
     Go to Page 5, Step 019, Entry Point Z.
  004
  Go to corresponding MAP.
005
1.Probe 01A-A2D2-M04
'-TR105 TH failed D08'
(ALD-YB643).
Is the down indicator of the probe on?
  006
  1.Press power-off key.
  2. Replace PC-sense card 2 in position
  01A-A2C2.
  Go to Page 5, Step 019, Entry Point Z.
007
(Entry Point B)
Connect CE-meter(range 30VDC)
-lead to PS105-TB03-001
'DC-GND'
+lead to connector PS105-01-004
'+24VDC PS104 to PS105'
(ALD-YA461).
Is +24VDC present?
```

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```
D E Power Problem

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008

1.Press power-off switch.
2.Check and repair wiring of +24V net from
PS104 to PS105.
|-----|
| BOARD |*| 01A-A2B3-E14 (ALD-YC831)
|-----|
| Board wiring
|-----|
| CONN |=| 01A-A2C1-B13 (ALD-YB223)
|-----|
| Cable
|-----|
| CONN |=| PS105-01-004 (ALD-YA461)
|-----|
| * '+24V PS104'
```

Go to Page 5, Step 019, Entry Point Z.

#### 009

1.Press power-off key.

2. Disconnect connector PS105-07.

Use ohmmeter and check connection via TR105 thermal switch between connector PS105-07-005 and PS105-07-008 male plug. Attention:

Thermal switch is located inside of TR105. The thermal switch opens if an overheating condition appears and closes if the overheating condition disappears.

Is the thermal switch of TR105 open? (no connection between connector PS-105-07-005 and PS105-07-008)

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EC 366387

PEC 366356

2 4

2820

REF.CODE F7D50001 H J 2820 MAP F7B0-4 **Power Problem** PAGE 4 OF 5 010 013 Use ohmmeter and check connection between 1.Remove BPC card from position connector PS105-01-001 01A-A2B2. '-TR105 TH failed D08' 2.Use ohm meter (range ohm X1) and (ALD-YA461) connect the leads to any D08 pin and 01A-A2B2-U07 'DC-Gnd' '-TR105 TH failed D08' and to 01A-A2D2-M04. (ALD-YB423). '-TR105 TH failed D08.' (ALD-YB643). Is the connection ok? YN Is the resistance higher than 100k ohm? 011 Repair wiring of signal 014 '-TR105 TH failed D08' Suspect short circuit to ground. from connector PS105-01-001 Repair wiring of signal (ALD-YA461) '-TR105 TH failed D08' to 01A-A2B2-U07. (ALD-YB623) (ALD-YB423). Go to Page 5, Step 019, Entry Point Z. Go to Page 5, Step 019, Entry Point Z. 015 012 1.Replace BPC card which was previously 1.Disconnect paddle card from 01A-A2YA. removed from 01A-A2B2. 2.Remove PC sense card 01A-A2D2 2.Reinstall all previously removed cards and 3.Use ohmmeter (range ohm X 1) connectors. Go to Page 5, Step 019, Entry Point Z. and check resistance between the following points: a) 01A-A2B2-D08 016 'DC-GND' Use ohmmeter (range ohm X1) and 01A-A2B2-U07 and check connection between 01A-A2B2-S06 Resistance must be approximately 1150 ohm. '-TR105 TH failed D08' b) 01A-A2B2-U07 and 01A-A2B2-S06 (ALD-YB423) Resistance must be approximately 900 ohm. and 01A-A2D2-M04 (ALD-YB643) Are both resistances ok.? Is the connection o.k.? Y N 017 Repair board wiring for signal '-TR105 TH failed D08' from 01A-A2B2-S06 to 01A-A2D2-M04 or replace board 01A-A2. Go to Page 5, Step 019, Entry Point Z. 18JUL80 PN 4008768

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PEC 366356



REF.CODE F7D50001

**Power Problem** 

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#### 018

K 4

The Wiring is ok.

#### (Entry Point C)

TR105 thermal switch may have closed again.

Reconnect all connectors and retry power on.

If the same failure occurs again, replace transformer TR105

If any other failure occurs go to MAP according to displayed reference code.

#### 019

Thermal switch of TR105 is open.

- 1.Switch off PCC-CB01.
- 2. Replace TR105.

(Entry Point Z)

Go To Map 0204, Entry Point A.

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MAP F7B0-5

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PEC 366356

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### **POWER PROBLEM**

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#### **ENTRY POINTS**

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	А	1	001

#### **EXIT POINTS**

EXIT TH	IS MAP	ТО	
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT
5 9	024 050	0200 0202	A A
5	021	0204	Α
10	059	0282	Α
6	031	0287	Α

#### 001

Symptom:

PS105 + 8.5V on O1A-A1 out of tolerance, A02.

Suspected errors or FRU's (including intermittent errors)
1

#### (Entry Point A)

Is PS105-CP06 tripped?

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REF.CODE F7D50201

A B ACA2830

15SEP82 PN 4008773 EC 366589 PEC 366387 2830 MAP F7B1-1 PAGE 2 OF 10

#### 002

- 1.Press power-off key.
- 2.Switch to CE-mode at CE panel.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

Y N

003

Is reference code F7D50201 displayed?

ΥN

004

Is any other reference code displayed?

Y N

005

Go to Page 5, Step 024, Entry Point Y.

006

Go to MAP for displayed reference code.

15SEP82

2830

MAP F7B1-2

PN 4008773

EC 366589

2830

7 3

MAP F7B1-2

2830

#### **POWER PROBLEM**

PAGE 3 OF 10

#### 007

- 1.Press power-off key.
- 2.Disconnect connectors PS105-02 and PS105-04. (ALD-YA461)
- 3.Install a jumper from 01A-A2B2-B12 '-Pick PCC-K02 C02' (ALD-YB421) to any D08 pin 'DC-GND'.

NOTE: This jumper will pick PCC-K02 and PS105 will be switched on.

- 4.Connect CE-meter (range 15VDC) to following table and check for correct DC-Voltage from PS105. (ALD-YA461)
- 5. Press power-on switch.

	Normal Voltage		+ Lead		- Lead	   	Lower Limit	
•	+8.5 V -5.1 V		PS105-02-003 PS105-02-004		PS105-02-007 PS105-02-012	•	+7.8 V -4.6 V	1

#### Are any DC-voltage below the lower limit?

N

#### 800

- 1.Press power-off key.
- 2.Reconnect connectors PS105-02 and PS105-04.
- 3. Remove jumper 01A-A2B2-B12 previously installed.
- 4. Connect CE-meter (range 15VDC)
- +lead to 01A-A1H6-D02
- '+8.5V sense PS105 01A-A1 A02'

(ALD-YC823)

-lead to any D08 pin.

The +lead of your meter must be connected without removing the connectors.

5. Press power-on switch and wait approximately one minute.

## Was +8.5VDC at least momentarily present?

V N

6 4 L E F C 15SEP82

PN 4008773

EC 366589

PEC 366387

2830

MAP F7B1-3

F G 3 3	REF.CODE F7D50201	J	2830		MAP F7B1-4	
3 3	POWER PROBLEM					
	DACE 4 OF 10					
	PAGE 4 OF 10	1				
		1.				
009		013				
1	power-off key.		the voltage measi	ured ii	n the previous	
2.Ensur and	e that connectors on 01A-A1B3-A14	step 2.0VI	higher than			
1	A-A1W3-A14 are seated correctly.	2.0VI	JC f			
	ect CE-meter (range 15VDC)	i ''				
1	to 01A-A1B3-A14 or	01	4		•	
01A-A	41W3-A14	1.1	ress power-off ke	∍y.		
′+8.5V	/ PS105 to 01A-A1 CD ATT'	2.0	Connect CE-meter	(range	e 1.5VDC)	
,	YC821)	4	lead to paddle card	d conn	ector exit	
	to any D08 pin.	1 -	1A-A2A4-D12			
	lead of your meter must be connected		+1.5V sense +8.5V	01A-	A1 A02′	
1	ut removing the connectors.		ALD-YB243)	_	•	
	s power-on switch and wait ximately one minute.		lead to any D08 pir Press power-on sw		nd wait	
арріол	Amatery one minute.		pproximately one r			
Was +8	3.5VDC at least momentarily	"	pproximatory one r	imiato	•	
present		l w	as +1.5VDC at lea	st mo	mentarily	
ΥN			esent?		•	
		ΙY	N			
010						
Got	o Page 8, Step 038, Entry Point G.		015			
011			1.Press power-off			
011	d wiring of +8.5V net defective.	2.Connect CE-meter (range ohm X1) to any D08 pin and to 01A-A2A4-D12				
	s power-off key.		'+1.5V sense +8.			
	ace board 01A-A1.	-	(ALD-YB243).	0 0 0 1.		
2	Page 5, Step 021, Entry Point Z.		3.Remove PC sens	se car	d from position	
			01A-A2D2.		·	
012						
•	ower-off key.	1 1	Is the resistance	below	/ 200 ohm?	
	CE-meter (range 1.5VDC)		YN			
	01A-A2D2-B04		010			
(ALD-YB	ense +8.5V 01A-A1 A02′	1	016 (Entry Point L)			
•	any D08 pin.		(Entry Point L)			
	y observe your meter, press	1 1	1.Press power-	off ke	eV.	
	n switch and wait approximately one	1 1	1		able with paddle	
minute.			card from 01A			
		11	(ALD-YC823)			
	VDC +/-10% at least momentarily		to			
present?			01A-A2A4-D	12		
Y N I I		11	(ALD-YB243)	C+ (	)21 F-4 D-:4 7	
			Go to rage 5,	step t	021, Entry Point Z.	
			15SEF	282	PN 4008773	
5	•	בב	EC 36	6589	PEC 366387	
5 . H J		5 5 K L	M 2830		MAP F7B1-4	

KLM REF.CODE F7D50201 **POWER PROBLEM** PAGE 5 OF 10 017 Do not disconnect the CE-meter. 1.Remove paddle card from position 01A-A2A4. Is the resistance below 200 ohm? 018 Go to Page 4, Step 016, Entry Point L. 019 There is a short circuit between the signal '+1.5V sense +8.5V 01A-A1 A02' (ALD-YB641) (ALD-YB243) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Step 021, Entry Point Z. 020 1.Press power-off key. 2.Repair sense wiring from 01A-A2D2-B04 '+1.5V sense +8.5V 01A-A1 A02' (ALD-YB641) to 01A-A2A4-D12 '+1.5V sense +8.5V 01A-A1 A02' (ALD-YB243) or replace board 01A-A2. Go to Step 021, Entry Point Z. 021 1. Press power-off key. 2. Replace paddle card with cable in position 01A-A2A4.

(Entry Point Z)

Go To Map 0204, Entry Point A.

H 2830 MAP F7B1-5

D022

1. Press power-off key.
2. Exchange both PC sense cards in positions

Is the *power complete* indicator on?
Y N

01A-A2D2 and 01A-A2C2.
3. Press power-on switch and wait

approximately one minute.

023 (Entry Point H)

Is any reference code displayed?
Y N

024 (Entry Point Y)

Go To Map 0200, Entry Point A.

025

Is reference code F7D50201 displayed?

N

026

1.Press power-off key.

2.Replace PC sense card in position 01A-A2C2.

Go to Step 021, Entry Point Z.

#### 027

Suspect power program error. Retry power on with the diagnostic diskette. If the reference code F7D50201 is displayed again, Go to Page 9, Step 050, Entry Point B.

15SEP82 PN 4008773 EC 366589 PEC 366387 2830 MAP F7B1-5 E N 3 5

# REF.CODE F7D50201 POWER PROBLEM

PAGE 6 OF 10

028

1.Press power-off key.

- 2.Replace PC sense card which is now in position 01A-A2C2.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

ΥN

029

Go to Page 5, Step 023, Entry Point H.

030

Go to Page 5, Step 021, Entry Point Z.

031

(Entry Point M)

Go To Map 0287, Entry Point A.

2830

MAP F7B1-6

15SEP82

PN 4008773

EC 366589

PEC 366387

2830

MAP F7B1-6

# **POWER PROBLEM**

PAGE 7 OF 10

032 (Entry Point E)

1. Run voltage measurement program. 2. Check the following voltages for out of tolerance |-----Addr | Bit | Voltage | Board | Sense No. | Go to MAP 85 | 5 | +8.5V PS105 | 01A-A1 | A02 | F7B1 ______ 97 | 5 |-5.1V PS105 | 01A-C2 | A33 | F7B4 | 95 | 5 |-8.5V PS105 | 01A-C2 | A62 | F7B5 | 95 | 6 |-8.5V PS105 | 01A-A1 | A38 | F7B6 | 97 | 4 |+5.1V PS105 | 01A-A1 | A03 | F7BA 97 | 7 |+8.5V PS105 | 01A-C2 | A31 | F7B3 | 85 | 7 |+8.5V PS105 | 01A-B2 | A23 | |-----| 87 | 2 | +5.1V PS105 | 01A-C2 | A30 | F7B8 85 | 0 |+6.0V PS105 | 01A-A1 | A52 | F7B7 | 95 | 3 |-8.5V PS105 | 01A-B2 | A32 | F7B9

Are all voltages below maximum limit?

Y N 033 Is more than one voltage out of tolerance? Y N 034 (Entry Point K) Is +8.5V PS105 on 01A-A1 out of tolerance (Address 85, bit 5)?

15SEP82

PN 4008773

EC 366589

PEC 366387

2830

MAP F7B1-7

REF.CODE F7D50201 UVW 2830 MAP F7B1-8 **POWER PROBLEM** PAGE 8 OF 10 035 039 Go to MAP for failing voltage shown in table Go to Page 6, Step 031, Entry Point M. after ENTRY POINT E. Go to Page 7, Step 032, Entry Point E. 040 1. Press power-off key. 036 2. Repair or replace cable from Connect CE-meter (range 15VDC) connector PS105-02 +lead to 01A-A1H6-D02 to board 01A-A1. '+8.5V sense PS105 01A-A1 A02' (ALD-YA461) (ALD-YC823) Go to Page 5, Step 021, Entry Point Z. -Lead to any D08 pin 'DC-GND' 041 1. Press power-off key. Is +8.5VDC +/-1.0V present? 2. Remove all cards from board 01A-C2 column Y N K thru W and from board 01A-B2 column S if Auto Call Adapter (ACA) is installed and all cards from board 01A-A1. Connect CE-meter (range 15VDC) 3. Connect CE-meter (range 15VDC) +lead to 01A-A1B3-A14 +lead to 01A-A1H6-D02 or 01A-A1W3-A14 '+8.5V sense PS105 01A-A1 A02' '+8.5V PS105 to 01A-A1 CD ATT' (ALD-YC823) -lead to any D08 pin -lead to any D08 pin. 'DC-GND' 4. Press power-on switch and wait (ALD-YC821) approximately one minute. Is +8.5VDC +/-1.0V present? Is +8.5VDC +/- 1.0V present? Y N Ν 038 042 (Entry Point G) 1. Press power-off key. 2. Suspect sense wiring error on 1.Press power-off key. board 01A-A1. 2.Connect CE-meter (range 15VDC) Repair board wiring or replace board +lead to connector PS105-02-003 01A-A1. '+8.5V PS105 to 01A-A1 CD ATT' Go to Page 9, Step 047, Entry Point W. lead to connector PS105-02-007 'DC-GND' (ALD-YA461). 3. Press power-on switch and wait approximately one minute. Was +8.5VDC at least momentarily present? N 15SEP82 PN 4008773 EC 366589 PEC 366387 2830 MAP F7B1-8

REF.CODE F7D50201 POWER PROBLEM PAGE 9 OF 10 043 Suspect an overload condition caused by a faulty card. 1.Press power-off key. 2. Replug cards step by step. After each step press the power on key, observe your meter reading and wait approximately one minute. Replace the defective card which caused an incorrect meter reading at the sense point. 3. Press power-on switch. Go to Page 7, Step 032, Entry Point E. 044 (Entry Point F) 1. Check the accuracy of your CE-meter according to *Hints For Power MAP Usage* in book MI POWER, Vol.16. 2.Check +1.5V voltage at PC sense card 1 Connect CE-meter (range 5VDC) +lead to 01A-A2D2-B04 '+1.5V sense +8.5V 01A-A1 A02' -lead to any D08 pin. 'DC-GND' (ALD-YB641). Is +1.5VDC +/-10% present? YN Check +1.5V voltage at connector exit: 1.Connect CE-meter (range 1.5VDC) +lead to 01A-A2A4-D12. '+1.5V sense +8.5V 01A-A1 A02' -lead to any D08 pin 'DC-GND' (ALD-YB243). 2. Press power-on switch and wait approximately one minute. Is +1.5VDC +/-10% present? Y N

YZÄ

Q Y Z A 2830 MAP F7B1-9
A

O46
1.Press power-off key.
2.Repair or replace cable with paddle card from board 01A-A1 to

## 047 (Entry Point W)

01A-A2A4.

- 1. Press power-off key.
- 2. Repair wiring or replace board 01A-A2. Perform *Wiring Check Procedure* according to book Maintenance Information (MI) POWER in Vol.16.

Go to Page 5, Step 021, Entry Point Z.

#### 048

- 1. Press power-off key.
- 2.Exchange both PC sense cards in positions 01A-A2D2 and 01A-A2C2.
- 3. Press power-on switch and wait approximately one minute.
- 4. Run voltage measurement program.

# Is address 85 bit 5 out of tolerance?

ΥN

# 049

- 1.Press power-off key.
- 2.Replace PC sense card which is now in position 01A-A2C2.
- Go to Page 5, Step 021, Entry Point Z.

050

(Entry Point B)

Go To Map 0202, Entry Point A.

051

Go to Page 6, Step 031, Entry Point M.

PAGE 10 OF 10

052

Are all voltages below call CE-limit?

Y N

053

Go to MAP for failing voltage shown in table after ENTRY POINT E of this MAP. Go to Page 7, Step 032, Entry Point E.

#### 054

- 1.Press power-off key.
- 2.Switch CE mode off.
- 3. Press power-on switch and wait approximately one minute.

Is any reference code displayed?

YN

055

Go to Page 5, Step 021, Entry Point Z.

056

Go to corresponding MAP

#### 057

- 1. Press power-off switch.
- 2.Switch PS105-CP06 on.
- 3. Press power-on switch and wait approximately one minute.

Is PS105-CP06 tripped?

Y N

058

Go to Page 1, Step 001, Entry Point A.

059

Go To Map 0282, Entry Point A.

15SEP82

PN 4008773

EC 366589

PEC 366387

2830

MAP F7B1-10



# REF.CODE F7A50601 FIX 0000 POWER PROBLEM

PAGE 1 OF 2

#### **ENTRY POINTS**

#### **EXIT POINTS**

FROM	ENTER	THIS MAP	
MAP NUMBER	ENTRY POINT	PAGE NUMBER	STEP NUMBER
F7XX	Ą	1	001

EXIT TH	IS MAP	ТО		
PAGE	STEP	MAP	ENTRY	
NUMBER	NUMBER	NUMBER	POINT	
2	007	F7BC	AA	
	004	0200	A	

#### 001

Symptom:

PS105 +8.5V on 01A-C2 failing, A31

Suspected errors or FRU's (including intermittent errors)

1 | +8.5V distribution.
2 | PS105.
3 | TR105.

## (Entry Point A)

- 1.Press power-off key.
- 2. Press power-on switch and wait approximately one minute.

Is ref. code F7A50601 displayed?

ΥN

002

Is any reference code displayed?

N Y

บบร

Is the power complete indicator on?

Y N

004

Go To Map 0200, Entry Point A.

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2850

MAP F7B3-1

2 2 2 A B C

Ref.C.F7A50601

**Power Problem** 

PAGE 2 OF 2

005

Suspect intermittent error. See hints in book Maintenance Information (MI) POWER.

006

Go to corresponding MAP.

007

Go To Map F7BC, Entry Point AA.

15MAR79

PN 8488565

EC 366205

PEC 366189

2850

MAP F7B3-2

# REF.CODE F7D50801 FIX 0001

PAGE 1 OF 9

**POWER PROBLEM** 

#### **ENTRY POINTS**

#### **EXIT POINTS**

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER
F7XX	A	1	001
0260	A		001

EXIT TH	IS MAP	Т0		
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT	
4 8 5 9	024 050 030 059	0200 0202 0204 0282	A A A	
5	031	0287	Α	

## 001

Symptom:

PS105 -5.1V on 01A-C2 out of tolerance, A33.

Suspected errors or FRU's (including intermittent errors)
1   PC sense card 01A-A2D2.   2   -5.1VDC distribution.   3   Load fault.   4   A33 sense wiring.   5   PS105.   6   TR105.

## (Entry Point A)

## Is PS105-CP04 tripped?

Y N

## 002

- 1. Press power-off key.
- 2. Switch to CE mode at CE-panel.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

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REF.CODE F7D50801

ACA2860

Normal	+ Lead	- Lead	Lower
Voltage			Limit
+8.5 V	PS105-04-013	PS105-04-006	+7.8 V
-5.1 V	PS105-04-002	PS105-04-001	-4.6 V

Are any DC-voltage below the lower limit?

**REF.CODE F7D50801** F 2860 MAP F7B4-3 **POWER PROBLEM** PAGE 3 OF 9 800 012 1. Press power-off key. 1.Press power-off key. 2. Reconnect connector PS105-04. 2.Connect CE-meter (range 1.5VDC) 3. Remove jumper 01A-A2B2-B12 previously -lead to 01A-A2D2-S03 '-1.5V sense -5.1V 01A-C2 A33' installed. 4.Connect CE-meter (range 15VDC) -lead to (ALD-YB643) 01A-C2W3-E01 '-5.1V sense PS1045 +lead to any D08 pin. 01A-C2 A33' 3. Carefully watch your meter, press power-on (ALD-YC871) switch and wait approximately one minute. +lead to any D08 pin. The -lead of your meter must be connected Was -1.5VDC at least momentarily present? without removing the connectors. Y N 4. Press power-on switch and wait approximately one minute. Was the voltage measured in the previous Was -5.1VDC at least momentarily present? step higher than 2.0VDC? 009 0141. Press power-off key. 1.Press power-off key. 2. Ensure that connectors on 2.Connect CE-meter (range 1.5VDC) 01A-C2W3-E01 and on 01A-C2W4-E01 -lead to paddle card connector exit are seated correctly. 01A-A2A3-B12 3.Connect CE-meter (range 15VDC) '-1.5V sense -5.1V 01A-C2 A33' -lead to 01A-C2W4-E01 (ALD-YB241) '-5.1V PS105 to 01A-C2 K/W CA' +lead to any D08 pin. (ALD-YC871) 3. Press power-on switch and wait +lead to any D08 pin. approximately one minute. The -lead of your meter must be connected without removing the connectors. Was -1.5VDC at least momentarily 4. Press power-on switch and wait present? approximately one minute. ΥN Was -5.1VDC at least momentarily 015 present? 1.Press power-off key. Y N 2.Connect CE-meter (range ohm x1) to any D08 pin and to 010 01A-A2A3-B12 Go to Page 7, Step 038, Entry Point G. '-1.5V sense -5.1V 01A-C2 A33' (ALD-YB241). 011 3. Remove PC-sense card from Board wiring of -5.1V net is defective. position 01A-A2D2. 1. Press power-off key. 2. Replace board 01A-C2. is the resistance below 200 ohm? Go to Page 5, Step 030, Entry Point Z. 15SEP82 PN 4008774 EC 366589 PEC 366387 2860 MAP F7B4-3

REF.CODE F7D50801 **POWER PROBLEM** PAGE 4 OF 9 016 (Entry Point L) 1.Press power-off key. 2. Repair or replace cable with paddle card from board 01A-C2 to 01A-A2A3. Go to Page 5, Step 030, Entry Point Z. 017 Do not disconnect the CE-meter. 1. Remove paddle card from position 01A-A2A3. Is the resistance below 200 ohm? Y N 018 Go to Step 016, Entry Point L. 019 There is a short circuit between the signal '-1.5V sense -5.1V 01A-C2 A33' (ALD-YB643) (ALD-YB241) and DC-GND. Check and repair board wiring or replace board 01A-A2. Go to Page 5, Step 030, Entry Point Z. 020 1. Press power-off key. 2.Repair sense wiring from 01A-A1D2-S03 '-1.5V sense -5.1V 01A-C2 A33' (ALD-YB643) to 01A-A2A3-B12 '-1.5V sense -5.1V 01A-C2 A33' (ALD-YB241) or replace board 01A-A2. Go to Page 5, Step 030, Entry Point Z. 021

1. Press power-off key.

2.Replace paddle card with cable in position 01A-A2A3 (ALD-YB241).

Go to Page 5, Step 030, Entry Point Z.

2860

022

1. Press power-off key.

2.Exchange both PC sense cards in positions 01A-A2D2 and 01A-A2C2.

MAP F7B4-4

3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

ΥN

023

(Entry Point H)

Is any reference code displayed?

ΥN

024

(Entry Point Y)

Go To Map 0200, Entry Point A.

025

Is reference code F7D50801 displayed?

ΥN

026

1.Press power-off key.

2.Replace sense PC sense card in position 01A-A2C2.

Go to Page 5, Step 030, Entry Point Z.

027

Suspect power program error. Retry power on with the diagnostic diskette. If the reference code F7D50801 is displayed again, Go to Page 8, Step 050, Entry Point X.

15SEP82

PN 4008774

EC 366589

PEC 366387

2860

MAP F7B4-4

5

M

# **POWER PROBLEM**

PAGE 5 OF 9

028

- 1.Press power-off key.
- 2. Replace PC sense card which is now in position 01A-A2C2.
- 3. Press power-on switch and wait approximately one minute.

Is the *power complete* indicator on?

029

Go to Page 4, Step 023, Entry Point H.

030

(Entry Point Z)

Go To Map 0204, Entry Point A.

031

(Entry Point C)

Go To Map 0287, Entry Point A.

15SEP82

PN 4008774

EC 366589

PEC 366387

2860

MAP F7B4-5

(Entry Point E)

2860 MAP F7B4-6

1. Run voltage measurement program.   2. Check the following voltages for out of tolerance										
Addr	Bit	'	Volt	age	1	Board	Ser	nse No	.  (	Go to MAP
85	5	+8	.5V	PS105		01A-A1		A02		F7B1
97	5	-5	. 1V	PS105	1	01A-C2		A33	1	F7B4
95	5	1-8	.5V	PS105	1	_01A-C2		A62		F7B5
95	6	I-8	.5V	PS105		01A-A1		A38		F7B6
97	4	+5	. 1V	PS105		01A-A1	1	A03	1	F7BA
97	7	1+8	.5۷	PS105	1	01A-C2		A31		F7B3
85	7	+8	.5۷	PS105		01A-B2		A23	1	F7BB
87	2	+5	.1۷	PS105		01A-C2		A30	1	F7B8
85	0	+6	.ov	PS105		01A-A1		A52		F7B7
95	0	1-8	.5V	PS105	1	01A-B2		A32		F7B9

# Are all voltages below maximum limit? Y $\,\mathrm{N}$

0 R REF.CODE F7D50801 POWER PROBLEM PAGE 7 OF 9 035 Go to MAP for failing voltage shown in table after ENTRY POINT E. Go to Page 6, Step 032, Entry Point E. 036 Connect CE-meter (range 15VDC) -lead to 01A-C2W3-E01 '-5.1V sense PS1045 01A-C2 A33' (ALD-YC871) +Lead to any D08 pin 'DC-GND' ls -5.1VDC +/-1.0V present?Y N 037 Connect CE-meter (range 15VDC) -lead to 01A-C2W4-E01 '-5.1V PS105 to 01A-C2 K/W CA' +-lead to any D08 pin 'DC-GND' (ALD-YC871) Is -5.1VDC +/-1.0V present? ΥN (Entry Point G) 1.Press power-off key. 2.Connect CE-meter (range 15VDC) -lead to connector PS105-04-001 '-5.1V PS105 to 01A-C2 K/W CA' +lead to connector PS105-04-002 'DC-GND' (ALD-YA461). 3. Press power-on switch and wait approximately one minute. Was -5.1VDC at least momentarily present? Y N 039 Go to Page 5, Step 031, Entry Point C.

TU

T U 2860 MAP F7B4-7

O40

1.Press power-off key.

2.Repair or replace cable from connector PS105-04 to board 01A-C2W4-E01.

(ALD-YA461)
(ALD-YC871)

Go to Page 5, Step 030, Entry Point Z.

#### 041

- 1. Press power-off key.
- 2.Remove all cards from board 01A-C2 column K thru W.
- 3.Connect CE-meter (range 15VDC)
- -lead to 01A-C2W3-E01
- '-5.1V sense PS1045 01A-C2 A33' (ALD-YC871)
- +lead to any D08 pin.
- 4. Press power-on switch and wait approximately one minute.

#### Is -5.1VDC +/- 1.0V present?

ΥN

#### 042

- 1.Press power-off key.
- 2.Suspect sense wiring error on board 01A-C2.

Repair board wiring or replace board 01A-C2.

3. Press power-on switch and wait approximately one minute.

Go to Page 6, Step 032, Entry Point E.

#### 043

Suspect an overload condition cause by a faulty card.

- 1. Press power-off key.
- 2.Replug cards step by step. After each step press the power on key and observe your meter reading. Replace the defective card which caused an incorrect meter reading at the sense point.
- 3. Press power-on switch and wait approximately one minute.

Go to Page 6, Step 032, Entry Point E.

REF.CODE F7D50801 **POWER PROBLEM** PAGE 8 OF 9 044 (Entry Point F) 1. Check the accuracy of your CE-meter according to *Hints For Power MAP Usage* in book MI POWER, Vol.16. 2.Check -1.5V voltage at sense card 1 entry: Connect CE-meter (range 5VDC) -lead to 01A-A2D2-S03 '-1.5V sense -5.1V 01A-C2 A33' +lead to any D08 pin. 'DC-GND' (ALD-YB643). Is -1.5VDC +/-10% present? Y N Check -1.5V voltage at connector exit: 1.Connect CE-meter (range 1.5V DC) +lead to 01A-A2A3-B12. '-1.5V sense -5.1V 01A-C2 A33' +lead to any D08 pin 'DC-GND' (ALD-YB241). 2. Press power-on switch and wait approximately one minute. Is -1.5VDC +/-10% present? Y N 046 1.Press power-off key. 2. Repair or replace cable with paddle card from board 01A-C2 to 01A-A2A3. Go to Page 5, Step 030, Entry Point Z. 047 1. Press power-off key. 2. Repair wiring or replace board 01A-A2. Go to Page 5, Step 030, Entry Point Z.

048 1. Press power-off key. 2. Exchange both PC sense cards in positions 01A-A2D2 and 01A-A2C2. 3. Press power-on switch and wait approximately one minute. 4. Run voltage measurement program. Is address 97 bit 5 out of tolerance? YN 049 1. Press power-off key. 2. Replace PC sense card which is now in position 01A-A2C2. Go to Page 5, Step 030, Entry Point Z. 050 (Entry Point X) Go To Map 0202, Entry Point A. Go to Page 5, Step 031, Entry Point C. 052 Are all voltages below call CE-limit? Y N 053 Go to MAP for failing voltage shown in table after ENTRY POINT E of this MAP. Go to Page 6, Step 032, Entry Point E. 054 1. Press power-off key. 2.Switch CE-mode off. 3. Press power-on switch and wait approximately one minute. Is any reference code displayed? Y N 055 Go to Page 5, Step 030, Entry Point Z. 15SEP82 PN 4008774 EC 366589 PEC 366387

2860

MAP F7B4-8

2860

MAP F7B4-8

REF.CODE F7D50801 **POWER PROBLEM** 

PAGE 9 OF 9

2860

MAP F7B4-9

056

Go to corresponding MAP.

## 057

- 1.Switch PS105-CP04 on.
- 2. Press power-on switch and wait approximately one minute.

Is PS105-CP04 tripped?

ΥN

058

Go to Page 1, Step 001, Entry Point A.

059

Go To Map 0282, Entry Point A.

PN 4008774 EC 366589

PEC 366387

2860

MAP F7B4-9

15SEP82

# REF.CODE F7A51001 FIX 0000

POWER PROBLEM

PAGE 1 OF 2

#### **ENTRY POINTS**

FROM	ENTER	THIS MAP	
MAP	ENTRY	PAGE	STEP
NUMBER	POINT	NUMBER	NUMBER

F7XX | A ' 1

#### **EXIT POINTS**

EXIT TH	IS MAP	то		
PAGE NUMBER	STEP NUMBER	MAP NUMBER	ENTRY POINT	
2	007 004	F7BD 0200	AA	

#### 001

Symptom:

PS105 -8.5V on 01A-C2 failing, A62

Suspected errors or FRU's
(including intermittent errors)
1 | -8.5V distribution.
2 | PS105.
3 | TR105.

001

#### (Entry Point A)

- 1.Press power-off key.
- 2.Press power-on switch and wait approximately one minute.

Is reference code F7A51001 displayed?

Y N

002
Is any other reference code displayed?
Y N

003
Is the power complete indicator on?
Y N

004
Go To Map 0200, Entry Point A.

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2870 MAP F7B5-1

2 2 2 A B C

4331

A B C Ref.C.F7A51001

Power Problem

PAGE 2 OF 2

O05

Suspect intermittent error. See hints in book Maintenance Information (MI)
POWER.

O06
Go to corresponding MAP.

Go To Map F7BD, Entry Point AA.

2870 MAP F7B5-2

15MAR79 PN 8488567 EC 366205 PEC 366189 2870 MAP F7B5-2